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ERRATA.

- No. 13, page 27, line 12, for flint-bearing implements read limestones.
 No. 32, page 53, line 25, for "plano-convex" surface read convex surface.
 No. 69, page 111, line 4, for instruments read implements.
 No. 104, page 168, line 17, for L. Huxley read J. Huxley.
 No. 108, page 175, line 22, for I Xul read 17 Xul.
 No. 108, page 175, line 30, for S read So.

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FIG. 1.

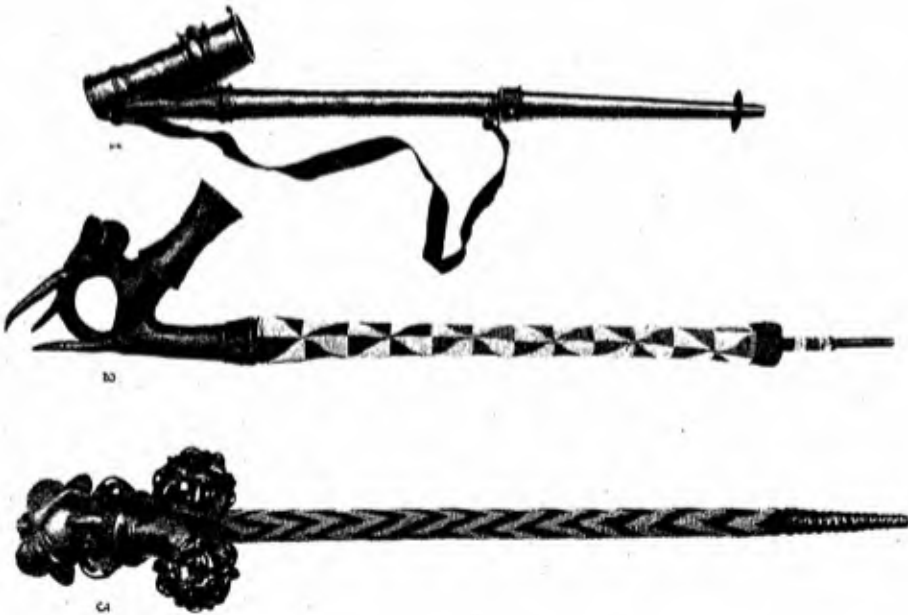


FIG. 2.

Mus. Arch. and Eth. Cambridge.

BRASS-CASTING IN CENTRAL CAMEROON.

MAN

A MONTHLY RECORD OF ANTHROPOLOGICAL SCIENCE.

PUBLISHED UNDER THE DIRECTION OF THE
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N.B.—All communications printed in MAN are signed or initialled by their authors, and the Council of the Institute desires it to be understood that in giving publicity to them it accepts no responsibility for the opinions or statements expressed.

N.B.—MAN, 1922, consists of twelve monthly-published sheets, of at least sixteen pages each, printed in single column; containing "Original Articles" and substantial "Reviews" of recent publications; all numbered consecutively 1, 2, 3, onwards.

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ORIGINAL ARTICLES.

With Plate A.

Africa, West: Technology.

Malcolm.

A Note on Brass-casting in the Central Cameroon. By
L. W. G. Malcolm.

Of the origin of brass-casting in the Bagam area, Central Cameroon, the head-chief of the *Eyāp* could give no information. He said that his workmen were always acquainted with the art.

The tribes living to the west and north of the neighbouring town of Bamum say it was from this town that they acquired their knowledge of brass-casting. On the other hand, the paramount chief of Bamum says that it was brought in by an invading race from the north-east.

According to Ankermann* the *Eyāp* learned the art from the Bamum.

In any case the practice seems to be fairly well confined to one area in south-west Adamawa, the principal towns being Bamum and Bagam.

As a rule the material used to-day is of European origin. In the north it appears that tin was brought in formerly from Northern Nigeria, and Thorbecke† considers that copper may have been brought in from the south-east, from the Congo, probably from the Katanga area.

In all cases it appears that the method of casting is by the *cire perdue* process.

As far as could be ascertained the *Eyāp* specialise more in the casting of tobacco pipe bowls (*Kuup ndāpa*), personal ornaments, and grotesque animal and bird forms. In Bamum, small flasks for holding perfumes and bottle stoppers are made, but these were not to be seen in the Bagam area. Bells are also cast; these are not used by the *Eyāp*, but sold to neighbouring tribes (Fig. 1).



FIG. 1.—BRASS BELL.

* Ankermann, B.: "Bericht über eine ethnographische Forschungareise ins Graaland von Kamerun," *Zeitschr. für Ethnol.*, Bd xlii, 1910, 288-310.

† Thorbecke, F.: "Im Hochland von Kamerun." 3. Teil. *Abhandl. des Hamburg. Kolonialinstit.*, xxxi, Reihe C., Bd. 7, 1919, 49.

Concerning the manufacture of pipe bowls, Hutter* says: "Darin sind die Bali-Bagam (*sic*) Meister und wahre Kunstwerke afrikanischen Plastik wissen zu bilden."

Passarge† records that Moisel has in his possession a brass casting of a chameleon which was made at Bagam.

Referring to brass-casting in the Cameroon, Ankermann says: "Die geschnitzten Trinkhörner sind denen der Bakuba so ähnlich, dass ein blosser Zufall wohl ausgeschlossen ist, and wenn Frobenius recht hat mit seiner Vermutung, das die Vorfahren der Bakuba den Erzguss gekannt haben, so würde Nordwest-Kamerun ein Bindeglied zwischen diesen und Benin bilden. Auf die grosse Ähnlichkeit der Ornamentik in beiden Kulturen hat gleichfalls schon Frobenius hingewiesen. Das charakteristische Bandmuster tritt freilich in Nordwest Kamerun sehr zurück, wenn es auch nicht ganz fehlt; an seiner Stelle dominieren Zickzack- und Dreieckmuster, der Mäander und eine Reihe aus Tierfiguren—Spinne, Frosch, Eidechse—abgeleitete Ornamente."

The available evidence concerning the similarity between the brass- or bronze-casting of the various tribes in the Grassland area of the Cameroon cannot be dealt with in any detail owing to lack of material.

The brass-caster (*ngyî iyâp*) in Bagam has a definite social position in the tribe, and has the status of an attendant (*cuo foñ*) on the head-chief. All orders for him must come direct from the head-chief.

The brass-casting hut is situated not far from the head-chief's quarters, and is surrounded by a number of compounds. It is walled on three sides only, and the fire-place is in the centre.

The usual materials used are brass, tin, and the solder obtained from discarded tins. The former metal is obtained from materials of European origin, such as brass scrap, old locks, spent cartridge cases, and rough castings.

Model.—The model is always made from beeswax, and as wax is obtainable only at certain times of the year, a supply is kept in store. Hollow articles, such as pipe

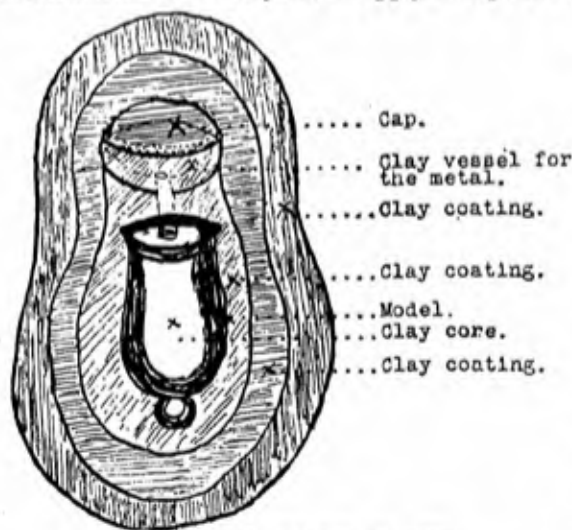


FIG. 2. MOULD FOR CASTING.

bowls, bracelets and bells, have a core made from clay in which an amount of chopped grass has been mixed. The wax, before being modelled, is refined and worked into thin sheets. With his finger, moistened in hot water, the workman works a layer of wax on the clay core, and smooths it with an iron-bladed spatula or strip of raphia palm. The model is then built up on this base. The parts to be cast solid are modelled wholly in wax. After the wax-model has been prepared, soft clay is worked round it, and at the top a cup-shaped vessel (*kuñ*) is moulded with a small round hole leading to the top of the model. The mould (Fig. 2) is dried in the sun, and then hardened in the fire. It is laid on the fire-bed very carefully, and subjected to a continuous gentle heat by means of the bellows.

* Hutter, F.: "Wanderungen und Forschungen im Hinterland von Nord Kamerun." Braunschweig, 1902.

† Passarge, S.: "Kamerun" (In H. Meyer's "Das Deutsche Kolonialreich," Band 1, 1909).

When objects are about to be cast the molten wax is poured out after the mould (*yuo puo*) has been sufficiently hardened. The brass which is to be melted is heated beforehand and then placed in the clay cup at the top of the mould. A clay cap (*ziñe kuñ*) is then luted on and dried by heat.

The whole is reinforced by a thick layer of clay and hardened; it is then laid in the embers of the fire with the cup uppermost. The fuel is heaped round it and the fire brought up to its greatest heat. The bellows used are furnished with two rods, and are worked by relays of boy-apprentices or men. After the mould has been thoroughly heated it is removed from the fire, and yet another layer of clay is built round it. After hardening it is rebudded in the fire-place, and the fire banked up with fuel. At first the heat is very gentle, but later on it is increased. It is kept at its highest temperature for about two hours, during which time the brass in the cup has melted and passed through into the mould. After cooling the mould is broken open, and the pieces are thrown away.

Clay.—The clay (*tobo tsaa*) is mixed with a certain proportion of kaolin, of which there is a plentiful supply in the neighbourhood, and pounded between two flat stones (*uyo* and *moñ ño*) until it is the right consistency. A quantity of chopped grass (*sisoñ*) is then mixed with it and it is repounded and worked into small rolls.

Fuel.—As a general rule the fuel used is charcoal (*ñkyie*), but in times of scarcity the kernels of the fruit (*ntoo mbe*) of *Canarium Schweinfurthii* are used. A good supply of both kinds of fuel is usually kept in the brass-casting hut, and sometimes they may be used together.

One of the head-chief's insignia of office is a brass tobacco pipe, and the usual type is that shown in Pl. A, No. 2, Fig. 2. The bowl is fashioned in the form of an elephant's head with four tusks, the tops of which are on a more or less even plane. The ears, which are above the eyes, stand straight up, and are ornamented anteriorly and posteriorly with a series of raised ridges arranged in spiral form. Running down the front of the head is a narrow, raised double line, which is continued until it meets the base of the stem-socket, where it bifurcates and bends round behind the two tusks attached to the back of the bowl; a series of diamond shaped raised lines is below the rim. At the base of the bowl there is an air-hole. The stem-socket is set at an angle from the bowl, and is furnished with a trellis-work design of raised lines below the rim. The stem is of wood, covered with blue, yellow, and white beadwork in a right-angled-triangular design. The mouth-piece is a brass tube. The weight of the bowl is 952 grms.

Another type of ceremonial pipe is shown in Pl. A, No. 3, Fig. 2. Here the bowl is of different design and represents a human face with bulging cheeks, aquiline nose, oblique eyes, outstanding ears and the mouth right at the base. The ears, which are set at the outer angles of the eyes, are decorated with a series of fine raised lines in the form of a composite loop and spiral. On the upper border the ornamentation consists of striated bands representing double chameleons, with their heads facing towards the top and bottom of the bowl. At right angles to this series, and between them there is a smaller set of double chameleons fashioned in the same manner, with the heads facing the larger forms. There is a bevelled flange above this ornamentation to support the bowl cover. An air-hole is pierced at the base of the bowl.

Attached to the bowl-cover there are two bosses each about 75 mm. in diameter. These consist of a network of striated bands representing double chameleons. They vary in length between 30 and 50 mm., and stand out between 13 and 16 mm. In general form they resemble a rosette, the centre being a knob where the heads of the animals come in contact with each other.

The stem is of wood and is covered by black and red beadwork in a zigzag pattern.

The mouthpiece is in brass and is cast in the form of a running spiral.

In Pl. A, No. 1, Fig. 2 is shown a representation of a chief's travelling pipe. The

bowl, in brass, is cylindrical, with a raised ring below the rim. The stem socket is set at an angle to the bowl and connected by a short round bar. The stem is in two pieces, the upper flanged in two places, the lower beaded at the junction. The mouth-piece is cast on the upper section. A leather carrying-thong is attached to two rings on the back of the stem-socket.

In Fig. 3 are shown various types of pipes used by headmen of the *Eyāp*. No. 5 is made from an alloy of solder and tin.

In Plate A, Fig. 1, Nos. 1-10 are shown various objects made in Bagam. No. 4 is a representation of a chamæleon, length 152 mm., height, 62 mm.; and 476 grms. in weight. No. 9 is an elephant with outstanding ears, protruding eyes, extended trunk and short tusks. It is 164.5 mm. in length, 44.5 mm. in height, and weighs 329 grms. No. 8 is a guinea-fowl. The body is decorated with a series of rings and spots; the wings and tail with straight lines. The head is ill-formed, and the eyes are protruding.

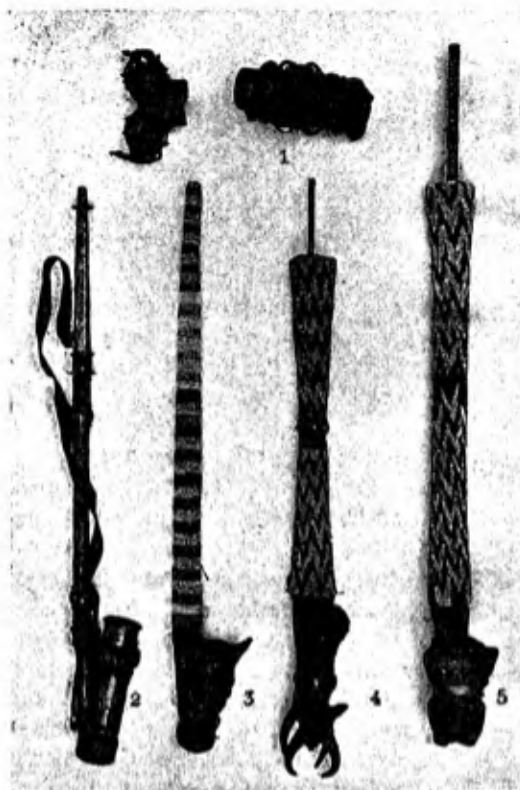


FIG. 3.—TYPES OF TOBACCO PIPES USED BY HEADMEN OF THE *Eyāp*.

The length is 93 mm., height, 46 mm., and the weight, 225 grms.

Fig. 10 is an ox-head with an elongated face, long incurved horns, and the mouth wide open showing two rows of teeth. It is 154 mm. high, 87.5 mm. wide at the horns, and weighs 302 grms.

Thrace: Archæology.

Childe.

Some Affinities of Chalcolithic Culture in Thrace. By V. Gordon Childe.

2

Eastern Bulgaria occupies an intermediate position between two areas of late neolithic painted pottery—Eastern Thessaly and South Russia (including therein Galicia, Bukowina, and Bessarabia)—which are notoriously closely inter-related. The existence of a developed civilisation in the chalcolithic stage between these provinces has long been known as a result of the excavations of MM. Seure and Degrand.* Since that date much additional evidence has been brought to light by the work of M. Popov in the Shumla district. At the same time the demonstration of an extension of the Thessalian painted ware—Dimini ware—into eastern Macedonia† has made an elucidation of the affinities of the Bulgarian material

* *Bull. de Correspondance Hellenique*, 1906, pp. 365ff.

† *Ann. Brit. Sch. Athens*, XXIII, p. 44.

an urgent matter. In the hopes of being able to throw some light on this question I have examined the material from Tell Ratcheff on the Tondja near Jamboli and Tell Metchkur near Philippopolis in the Maritza valley. This is now in the Museum of St. Germain-en-Laye, to whose conservators I wish to express my sincere gratitude.

The commonest pottery from these sites is ornamented with painted designs of spirals, circles with tangential bands, rudimentary meanders, chequers and wolf's-teeth. The surface, which is always smooth (probably slipped) and often polished, is either light red, yellowish-brown, or black according to the burning. In accord with the surface tint the paint shows up either as a dull white or as a metallic black or as a lustrous silver-white. Thus a superficial examination of the sherds gives the impression of three distinct techniques or styles of painting.

Closer study, however, reveals that in general only one paint was used; for on the unevenly fired sherds two or even three of these apparent styles may appear together. For instance, on a fragment of a cup with a vertical handle we have, on the handle and the upper part of the body, dull bands of unmistakably white paint on an orange ground, but near the base of the handle there is a black blotch, on which the paint shows up as a silvery grey; finally, immediately around the blotch, is an irregular zone in which the bands of paint appear metallic black. On this sherd the original design was clearly monochrome, since the three shades merge into one another imperceptibly on the same band of ornament without any sort of break. The occurrence of white and black* or black and silver-grey on the same fragment is well attested. So the white spiral on the reddish cup figured in *B.C.H.*, Fig. 36, assumes a black hue near the lip in front. The alternative change from black to silver-grey is well illustrated on a thick piece from a high-rimmed dish ornamented with rhombs. Where the surface is still brownish and the paint appears black against it, the biscuit is clay-coloured. Nearer the rim the biscuit is blackened throughout and on the swarthy surface the paint shows up as silver-white. As to the change from black to silver-white, the material at St. Germain only illustrates more richly a phenomenon which Mr. Thurlow Leeds had some time back pointed out to me on some sherds from East Macedonia in the Ashmolean Museum, where the first category—red-on-black—distinguished by Blegen and Welsh† can be seen passing over into the second—faint-white-on-black or red. Dimini ware from Thessaly seems to show the same relation between the first two categories. This question should well repay investigation by chemical methods.

In Bulgaria, at any rate, the painted fabric is to be regarded as a single technique. Still, there are some indications that the earliest ideal of the potter there was a red ware. From Tell Ratcheff 70 per cent. of the vases with red and white designs are marked "M" in Père Jérôme's catalogue,‡ signifying that they were found by his "potter's oven" at the lowest level of the mound. At that level black vases were, apparently, rare. A variant in which the ribbon spirals and other motives are first outlined with deep incisions and then hatched with cross incisions, the whole ribbon being subsequently painted rather thickly in white so as to cover both the incisions and the intermediate surfaces, apparently belongs to the same context. This ware is generally fine, and made from well-levigated clay with a red surface. This suggested priority of the red ideal would harmonise well with the derivation of the Bulgarian pottery from the Thessalian-South Russian series, where a red ware was the rule. The later preponderance of black fabrics would then be ascribed to the conditions of soil and climate existing in the area of its development. However, Seure and Degrand, who regard both mounds as tumuli, find no signs of distinction in the material from different levels.

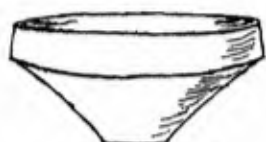
* It is noted by Père Jérôme, *Rev. Arch.*, p. 338, note 2.

† *Ann. Brit. Sch. Athens*, loc. cit.

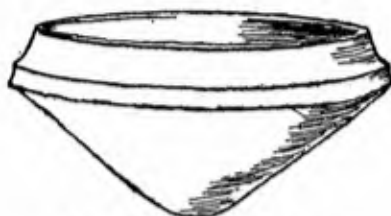
‡ *Revue Archéologique*, XXXIX, pp. 334f and note 1.

The forms assumed by the characteristic ware exhibit great diversity, but, with the exception of a deep bowl with a lug handle below at Tell Ratcheff, all the commonly recurring types have the inverted cone for their structural base.*

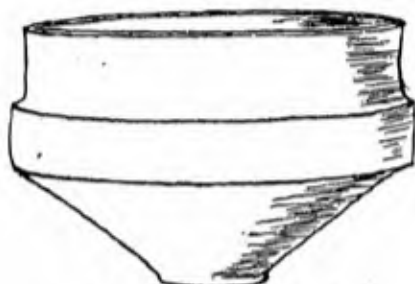
This characteristic pottery finds the closest analogies in technique, decoration, and form in eastern Thessaly. In technique the sherds with designs in white on red correspond exactly to the first category of Dimini ware† (B, 3a), the only difference



A. *Izv.*, 156. $\frac{2}{3}$.



B. *Rev. Arch.*, FIG. 3. $\frac{2}{3}$.



C. *Rev. Arch.*, FIG. 5. $\frac{2}{3}$.



D. DIMINI SHAPE. $\frac{2}{3}$.



E. *Revue Arch.*, FIG. 4. $\frac{2}{3}$.

FIG. 1.—TYPOLOGICAL SERIES OF DISHES AND BOWLS BASED ON AN INVERTED CONE.

A. B. C. E. BULGARIA. D. DIMINI.

being that the Bulgarian fabric is not always polished. The designs of spirals, etc., also are the same in general, but exhibit especially close affinities with the East Macedonian variant. So the meander-like pattern of the cup from Tell Metchkur‡ recurs at Bereketli,§ and the horizontal toothed band dividing the field into metopes filled with spiral designs of Macedonia|| recurs, with longer teeth, north of the range. The typological kinship between the conical bowl of Thrace and the Dimini shape¶ is self-evident. Tsountas has already drawn attention to the similarity between

* *E.g.*, *Rev. Arch.*, Figs. 3, 5 and 4.

† Wace and Thompson, "Prehistoric Thessaly," p. 16.

‡ *B.C.H.*, Fig. 64.

§ *B.S.A.*, *l.c.*, Fig. 1A.

|| *Id.*, Fig. 1E and F.

¶ Figs. A, B, and D.

his four-cornered bowls and the vessel from Tell Ratcheff*. The Ratcheff bowl† exhibits some analogy to a cup from Rakhmani also ornamented in white on red.‡ So the handle building on the cup already cited from Tell Metchkur recalls that on another vase from Rakhmani§.

As might be expected from the generic connection between Dimini ware of Thessaly and the painted fabrics of South Russia and neighbouring lands, the Bulgarian material finds many parallels there. For, not only is the inverted cone the ruling structural principle, but it gives rise to identical developments in both areas||. There need, then, be no hesitation in connecting the early pottery of the Toundja and Maritza valleys with the East European series that runs from South Russia to the shores of the Pagasean Gulf. On the other hand there is no doubt that they represent a highly specialised by-path of that otherwise very uniform series. This is proved both by the absence of the polychrome ware and fabrics ornamented with a warm black on a light slip which recur in Thessaly, South Russia, Galicia, and Bukowina, and the growing preference for black wares—in contrast to the red fabrics prevailing in the latter regions. Again, even in the fabric now under discussion we find forms in Bulgaria foreign to the other East European centres, notably the askos.

In fact, a glance at the figures in the publications of Père Jérôme and Seure and Degrand will suffice to prove that we have here a highly specialised culture province which cannot be regarded as a mere subdivision of any other. My object here is to obtain, if possible, a closer determination of the connections of that province. But, by way of introduction, it is well to mention that the material before us may not all belong to the same period and the total exclusion even of Roman or later objects cannot be guaranteed. For that reason we are obliged to rely mainly on internal evidence in evaluating our data, and it will be generally safer to place little reliance on isolated objects. The iron ring¶ from Tell Metchkur is a case in point. On the other hand, the occurrence of small copper objects at all levels in both mounds, taken in conjunction with the advanced type of the bored stone axes, is good evidence for ascribing the bulk of the material to the chalcolithic stage of culture. Fortunately we can supplement and control the evidence from these sites by the documents published by Popov in the *Izvestia Bulgarsko-lo arch. Druzhestvo*, IV and VI, from his excavations at Denev and Kodja Derman in north-east Bulgaria. That these documents refer to substantially the same culture would be at once evident from the ceramic forms alone. Common to the two groups are the conical dishes with moulded profiles (*Rev. Arch.*, Fig. 6, and *Izv.*, IV, p. 183, Fig. 156) developing through the bowls (*Rev. Arch.*, Fig. 3, and *Izv.*, Fig. 138) to the open craters (*Rev. Arch.*, Fig. 5, and *Izv.*, Fig. 135) and necked jars (*Rev. Arch.*, Fig. 8, and *Izv.*, Fig. 151). Spirals and wolf's-teeth are designs common to both sites. Popov's material includes many sherds ornamented in silver-grey on black. He ascribes this to graphite painting**—but white paint also occurs (*Izv.*, VI, p. 126). Impressed designs filled with white incrustation were common both at Kodja Derman and Denev and the same technique is met at Tell Metchkur

* *Revue Archéologique*, Fig. 18 (cf. Dimini and Sesklo, Pl. 6).

† *Rev. Arch.*, Figs. 11-13.

‡ Wace and Thompson, *op. cit.*, Fig. 21b.

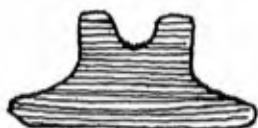
§ *Ib.*, Pl. 1.

|| So the form of *Rev. Arch.*, Fig. 5, recurs in the Tripolje area, cf. "Trudy XI. arch. S'ezda," Kiev, Pl. XXVIII., 7, No. 10, of the same plate is equally like an unpublished vase ornamented with lozenges and circles from Tell Metchkur, *B.C.H.*, p. 400, No. 299.

¶ *B.C.H.*, list No. 172.

** But in respect of at least one vase from Kodja Derman, Popov expressly states that: "as a result of the firing the pot has taken on a brick red colour, while the graphite with which "it was painted has become white" (*Izv.*, VI, p. 126).

(cf. *B.C.H.*, Fig. 51 and *Izv.*, Fig. 159). But the conclusive proof of the identity of culture throughout eastern Bulgaria is the distribution of odd lids (*B.C.H.*, Fig. 10, and *Izv.*, Figs. 168-175), "candlesticks" (*B.C.H.*, Fig. 24, and *Izv.*, Fig. 177), clay models of thrones (*B.C.H.*, Fig. 49, and *Izv.* VI, Fig. 145) and the unexplained



Izv., 177. "CANDLESTICK." $\frac{3}{4}$.



Izv., 178 B. $\frac{3}{4}$.

articles figured in *B.C.H.*, Fig. 7, and *Izvestia*, Fig. IV, 178. These shapes are peculiarly Bulgarian. Only slightly less unusual are the perforated vases (*B.C.H.*, Fig. 44, and *Izv.*, 162). The square-bored axes of horn are also characteristic (*B.C.H.*, Fig. 15, and *Izv.*, Fig. 210A and B), while bored hammer-axes in stone also belong to both groups of sites (*B.C.H.*, Fig. 34, *Izv.*, Figs. 184-6), as do statuettes in bone.

Certainly the more northern sites explored by Popov exhibit some signs of increased specialisation, e.g., the great development of incrustated wares, the wide employment of graphite, and the emergence of some new forms, notably the pedestalled cylinder vase (*Izv.*, Figs. 123-9). On the other hand metal was very rare,* while, as noted above, the Thracian tells were definitely chalcolithic. Nevertheless these points do not betoken more than local variations (the relative wealth in copper in the south would naturally be referred to the proximity of the Troad). As a whole the material from eastern Bulgaria is remarkably homogeneous and reveals a single and sharply defined culture province.

As already indicated, this culture exhibits the closest affinities to the areas with painted-spiral pottery to the south and north. To the ceramic evidence in this direction may be added certain other points. Bone implements occur in great profusion in both areas as in Bulgaria. The bored hammer-axes of the latter recur in a more advanced form at Tripolje (cf. *B.C.H.*, Fig. 34, in granite, and Trudy, *l.c.*, Pl. XXI 11 in copper). Animal figurines like those from Kodja Derman (*Prähistorische Zeitschrift*, 1912, p. 103, Figs. 12c and 13E) are met everywhere with the painted pottery in south Russia, Galicia, Bukowina, and Transylvania as well as at Dimini and Sesklo, but such models are also known from Hissarlik. A vase in the shape of a bull practically identical with that from the lowest level of Tell Ratcheff (*Rev. Arch.*, Fig. 1) is among the finds from Szipenitz at Vienna. Again, the fragment of a large vessel, reconstituted from the pieces figured in *B.C.H.*, Figs. 59-60, coincides exactly in profile, and resembles in its ornamentation of incised linear spirals and bands, the big piriform jars from Chwoiko's Culture A in the Kiev Government (Trudy, *l.c.*, Pl. XXVI 31). Vases of the same type were found at Kodja Derman, *Izv.*, VI, Pl. IV, 3-5. Clay seals or pintaderas such as Popov found at Denev are less decisive since their distribution covers a wider area than that of the painted-spiral pottery, including other parts of Austria and also Italy, while in Thessaly they seem to belong to the first neolithic period (Wace and Thompson, *op. cit.*, p. 73). Still, the close parallel between the Denev examples (*Izv.*, Fig. 110) and some from Priesterhügel deserves mention (*Mitt. Präh. Comm.*, Wien, 1903, p. 369, Figs. 11 and 14).

Moreover, clay thrones like those of Thrace, recur with the South Russian painted pottery (*Ailio, Pragen der russ. Steinzeit*, Fig. 34f).

* One copper hook from Denev, a celt like those from Dimini, and three pins—one with a looped head—from Kodja Derman, all of pure copper.

Turning south the bone statuette from Tell Metchkur finds its closest parallel at Dimini in stone (*cf. B.C.H.*, Fig. 57, with Tsountas, *op. cit.*, Pl. 37, 12). On the other hand there are not wanting signs of relation dateable to a later stage in Thessalian culture than that represented by Dimini ware. So the curious squatting figurines from Tell Ratcheff (*B.C.H.*, Figs. 25 and 26) exhibit some analogy to the male figurine from Zerelia VII. (Wace and Thompson, Fig. 110). So the steatopygous standing statuette from Kodja Derman (*Präh. Zeitschr.*, *l.c.*, Fig. 13B) is remarkably like one from Tsangli V (Wace and Thompson, Fig. 71B). It is not possible to say, without inspection of the sherds, whether some of Popov's "incrusted" ware is the same as the "crusted" ware of Thessaly (Γ17). I only saw one fragment from Tell Metchkur—carmine on black—which I would assign to that category. Again, the two askoi from the latter site are rather similar to vessels in Γ3 ware from Tsangli (Wace and Thompson, Fig. 60π) and Dimini (Tsountas, *op. cit.*, Fig. 206). But in the former the handle is attached to the neck instead of the back of the vessel (*cf. B.C.H.*, Fig. 32) and the larger example, which is painted in black on yellowish-brown clay, has a more marked neck, from which the body is distinguished by a definite angular bulge.

Considering the position of our sites Trojan influence seems unexpectedly slight. The bored hammer-axes from Troy I or II (*Schliemann Sammlung, e.g.*, No. 7196) exhibit certain analogies to these from Tell Metchkur, especially about the blade. But ceramic types characteristic of the Troad are conspicuously lacking. It is true that the perforated vase of *B.C.H.*, Fig. 39, has three feet, but there the analogies end. The two-handled cups from Thrace are entirely different from the Trojan series. They are so shallow as to belong rather to the dishes, and the handles are flat, splayed out from the rim and do not rise above it as does the "high-swung" Trojan type.*

Equally clear and significant is the absence of connections with the earlier cultures of the more western Balkans—Butmir or the lower Vinča strata. Sherds ornamented with ribbon-spirals in incised and *pointillé* technique such as are typical of Butmir and the older Serbian sites (Vassits in *B.S.A.*, XIV, pp. 319ff, and *Präh. Zeitschr.*, II, Pls. 13a and b) are completely lacking. Nor do we meet the pedestalled cup belonging to the same early context at Vinča (*ib.*, Pl. 11a), that from Tell Metchkur being obviously quite different (*B.C.H.*, Fig. 35). Moreover the figurines are far inferior in the modelling of the heads to those of the earlier strata at Butmir or Jabloniça. Even the head from Tell Metchkur (*B.C.H.*, Fig. 53) has only a hint of the Jabloniça style about the eyes (*cf. Hoerne's "Die Neol. Keramik in Oesterreich,"* Fig. 83). The triangular head of the Tell Ratcheff figurine might be claimed by Vassits for his earlier class, but the resemblance is slight. On the whole, connection with the older Serbian sites, Butmir and so the whole Central European series may be ruled out.

On the other hand, traces of contact with later stages of Serbian culture may be detected. Thus it seems natural to connect the so-called triangular "altars" from Tell Ratcheff (*B.C.H.*, Fig. 5) and Metchkur (*ib.*, Fig. 51) with the well-known examples from the middle strata at Vinča (*B.S.A.*, *l.c.*, Fig. 11), though the animal heads are missing. It is from the same levels in Serbia that we first meet bone idols, and harpoons in bone, and shell bracelets, all of which can be paralleled in eastern Bulgaria (*cf. Izv.*, *l.c.*, p. 213). At the same level begin rectangular huts as contrasted with the round or oval cabins with bothroi of the earlier Serbian sites, and we know from the clay hut models of Kodja Derman and Denev (*Izv.*, Fig. 130 and p. 219) that this type of architecture prevailed in Bulgaria as it did in stations

* However, it should be noted that bored bone pendants like those from Dinev (*Izv.*, IV, Fig. 204) are known from Kadi Köi on the Bosphorus (*Arne in Fornvännen*, 1922, p. 119, Fig. 27).

with painted pottery in South Russia and Transylvania. Now the middle strata at Vinča to which these parallels point are equated by Vassits with the third Thessalian period on the strength of the crusted ware ($\Gamma\gamma$) which they contain. That accords well with the evidence we have adduced for contact between Bulgaria and Thessaly extending into the third period.

Accordingly the culture we have discussed here must be partly contemporaneous with Thessaly III, though the occurrence of an analogue of Dimini ware in the Toundja and Maritza Valleys make it probable that the earlier material at those stations must go back to the second period of Thessaly. This would allow a range of from E.M. III to M.M. III in Cretan chronology for the development of Bulgarian culture. Perhaps Mr. Casson's excavation in Macedonia may supply some upper limit. Its essential affinities lie with the East European culture with painted pottery, but its marked idiosyncrasies, only some of which have been noted here, betoken a divergent local evolution which requires some length of time for its completion. These conditions will be best fulfilled by ascribing the East Bulgarian material to a branch of the same people who brought the Dimini culture to eastern Thessaly from South Russia or thereabouts. It affords an indication of the route they followed, but also shows that a considerable section was left behind to colonise the Thracian valleys. It is to the subsequent activities of these colonists that our material must belong.

V. GORDON CHILDE.

Europe: Archæology.

Reid Moir.

The Ice Age and Man. By J. Reid Moir.

3

It is not, apparently, recognised by some of the *savants* who are writing to MAN upon the question of the relationship of palæolithic flint implements to the English glacial deposits, that the only evidence of fundamental value in this enquiry is the occurrence of unrolled, non-derived specimens, resting beneath, or upon, some well-known, undisturbed, and "datable" glacial accumulation.

Mr. Burkitt [MAN, Vol. XXII, No. 104, December 1922] states, for example, that "Lower Palæolithic implements have been found in deposits resting on the "moraine of the last glaciation but one," and that "the best example of this is at Conliège, where an implement was discovered in a matrix of stones and clay "which rested on the bed rock of the plateau." And he goes on to say: "The "deposit and the contained implement are, therefore, of more recent date than the "last glaciation but one." This reasoning fails to appeal to me, and I would suggest that all Mr. Burkitt establishes is that the deposit in which the implement was found is, in all probability, later than "the last glaciation but one." If search were made in this implementiferous bed at Conliège, I have little doubt but that it would be found to contain material derived from deposits even more ancient than the earliest glacial accumulations. Mr. Burkitt would not, I presume, wish to claim that such material is of more recent date than the "last glaciation but one," and why, then, should he reach this conclusion regarding the derived flint implement, or implements, contained in the same deposit? He may, of course, have an answer to this question, but, if so, I would be grateful if he would publish it.

It will be seen that to claim, because an implement is found in a gravel, or some other deposit made up, solely, of *derived* material resting upon a glacial accumulation, that the specimen was necessarily made after this accumulation was laid down, is merely to add to the confusion already existing in regard to this question of the association of man with the Ice Age.

If investigators will, in future, bear this in mind, it seems to me that two salutary results will follow, viz.: (a) there will be less unintentionally fallacious statements published upon this problem, in MAN and elsewhere; and (b) it will be

more generally recognised that definite early palæolithic implements, of platessiform and batiform types, are, with much likelihood of accuracy, to be relegated to very late Pliocene, or Early Pleistocene time.*

J. REID MOIR.

Fiji: Sociology.

Hocart.

The Uterine Nephew. *By A. M. Hocart.*

4

We are all familiar with the curious custom which allows a Fijian's sister's son to help himself freely to his uncle's property. The case is famous because it is supposed to be a manifest survival of the time when a man inherited through his mother and succeeded to his uncle's property and not to his father's. So satisfying has this theory appeared, that little trouble has been taken to collect further facts that might confirm or disprove it.

In a paper on "Chieftainship in the Pacific"† I pointed out that the custom had been imperfectly described, and that the evidence, when recorded in detail, contains many facts which cannot be explained by this theory, if they are not actually inconsistent with it. These facts are:—

- (1) The deliberate excesses by which the custom is marked;
- (2) The beating which the nephew receives from his cousins whenever he exercises his right;
- (3) The offering which must be made before the right can be exercised;
- (4) The definite statement made by natives of the North and West that the right is not exercised at random, but only at offerings (*solevu*). Even in those parts of Fiji where the limitation is not expressed, the natives, in describing the custom, always appear to have in their mind's eye the visit of a nephew from abroad, when ceremonial exchanges and offerings are the rule;

- (5) Lastly, there is the strongly religious character of the custom.

Now it should be the ambition of all of us, who are interested in the comparative study of customs, to aspire to such a perfection of our science that its theories will explain the facts as rigorously as is the way in the older branches. We are far from having attained that condition, because our study is a new one, but we can gradually advance towards that ideal, by refusing to entertain theories that do not explain the consequences as satisfactorily as students of languages explain the forms of words.

I tried to set an example by propounding a theory of the uterine nephew's right which I believe to be better than the orthodox one, because it explains more. I fear that theory was still-born; but so far from losing faith in it, I feel more confident than before that it is a step in the right direction, that there is a very good chance of its being right, whereas the other cannot possibly be. I have, indeed, no new evidence, but my attention has been attracted by a detail which I had overlooked in the old evidence, and which carries the theory still further back towards origins.

First, let me recapitulate the theory: Fijian witnesses from the North and West definitely state that the sister's son only steals what has been offered up on the village green at a ceremonial, and he gets a beating for it. In the neighbouring islands of Tonga the sister's son comes forward at a kava ceremonial and carries away, quietly, the offering laid before his maternal uncle or grandfather. Among

* Most English geologists refer the Cromer Forest Bed to the end of the Pliocene, in opposition to the majority of their French colleagues, who regard this deposit as being of Early Pleistocene age. I hope to publish in the near future an illustrated account of a definite "hand-axe" of early palæolithic type found by Mr. J. E. Sainty in a Lower Glacial deposit at Sidestrand, Norfolk.

† *American Anthropologist* (N.S.), Vol. 17, 1915, p. 631

the Thonga of South-West Africa the uterine nephews steal the offerings made to the gods, are pursued, and pelted by the others.* All these peoples have classificatory systems of relationship similar in type. I have no hesitation in believing that all these people derive their kinship systems and the customs connected with them from the same common source. Why not? The language of Madagascar and that of Fiji are akin, why not the customs just over the Straits from Madagascar? Comparing, then, these customs, I concluded that the original custom consisted in the uterine nephew stealing the offering, and that the practice of South-Eastern Fiji was an extension due to divine kingship. There I left it, overlooking one very important sentence in Mr. Junod's book on the Thonga: "Uterine nephews are 'representatives of the gods, as we shall see later on, and they assert their right 'by stealing the offering and eating it up.' Elsewhere he tells us: 'Any man 'who has departed this earthly life becomes a *shikwembe*, a god' (p. 347). These gods then are spirits of the dead, who receive the offering through their representatives, the uterine nephews. It seems natural to conclude that it is also as representatives of the dead that the uterine nephews are pelted. But why should the spirits of the dead be pelted? Why, to drive them away so that they shall not haunt the place of offering.

This custom of the nephew stealing the offering is part and parcel of the same system as the customs connected with cross-cousinship. I have described in two papers, "The Fijian Custom of Tauvu"† and "More about Tauvu,"‡ how cross-cousins abuse one another, beat one another, steal from one another, and all with the greatest good humour. I there insisted on the fact that the custom stood under the sanction of gods or ghosts; but exactly why or how was not quite clear. Another puzzling fact was that the word *tauvu*, which belongs to the North-East of Fiji, means properly "god to one another," for *vu* means god, ancestor, and *tau* is a reciprocal prefix; *tama* means father, and *tautama* means "related to one another" as father and son." On this analogy, *tauvu* must mean "related as ancestor" and descendant" or "god and worshipper." Now if a man is a representative of his mother's gods or ghosts, he is a god to his cross-cousins and his cross-cousins are gods to him; for cross-cousins are, by definition, descended from each other's tribes in the female line.

I think the fact that the sentence I have quoted from Mr. Junod explains this detail, which so far had been inexplicable, is a good guarantee that it is the clue for the whole problem. It explains many other things:

(1) The excesses; for the nephews or cousins are imitating the ghosts they represent;

(2) The beating; and at the same time the good humour with which the cousins insult and rough-handle one another; for there is no hostility on either side.

(3) The statement made to me in the North-East Fiji that if a man reproaches his cross-cousin for helping himself to anything, that man will die. Why should he under the old theory?

(4) The great prestige which a chief's sister's son enjoys in Fiji: he represents the gods. In Tonga he is definitely of higher rank than his uncle.

There is one point which this theory does not explain; that is, why a nephew or cross-cousin has to make an offering before he can help himself. On the other hand, this fact is not irreconcilable with the theory; it is neutral.

All things considered we have every reason to be pleased with the theory; it explains so much. The evidence is very scanty indeed, for very little attention

* Junod, "Life of an African Tribe," I, p. 162.

† *Journal of Royal Anthropological Institute*, 1913, p. 101.

‡ *MAN*, 1914, 96.

has been given to kinship; outside Morgan's and Rivers' work information is scarce and neither of these two authors has given enough attention to the religious character of the kinship customs; yet I believe religion is nine-tenths of them, and the key to all these systems will be found in re-incarnation. Dr. Rivers has shown how these systems are all based on some form of marriage; but these marriages themselves are based, I am certain, on religious beliefs. It seems absurd at first sight that a man should marry his grandmother, as he does in the New Hebrides,* or that a man should address his father as "my son," as is done in the hills of Fiji; but if a man is his grandfather *redivivus* it is all perfectly natural and logical, as all customs become when they are once understood. It is one further merit of the theory expounded in this paper that it leads up to a belief which explains so many other features of kinship.

A. M. HOCART.

REVIEWS.

Physical Anthropology.

Army Medical Dept., U.S.A.

Army Anthropology: Vol. XV., pt. 1. History of the Medical Department of the United States Army in the World War.

5

The records obtained by the Surgeon General's department during the American Civil War for long served as a reference compendium for physical data with regard to emigrants of various European races. The data then collected, invaluable as they proved, were as nothing compared with those now available from the study of approximately two million men sent to mobilisation camps and of over half a million men rejected for military service by the local boards.

The fullest data concern stature, weight, and chest measurements, but subsidiary data deal with the sitting height, span, arm and leg lengths, various circumferences, and indeed most of the body measurements included in a complete scheme of examination. The results enable comparisons to be made between white and coloured troops, between citizens of one State of the Union and another, in accordance with the nationality when this was not American.

The rules for determining nationality provide that Hebrews were counted as such irrespective of their place of birth; all others, born in a foreign country, were credited to that country. Where neither parent was born in the United States and both were born in the same foreign country, the soldier was credited to that country; if both were not born in the same foreign country, the soldier was credited as of mixed origin. If the soldier and his parents were born in the United States but three or four grandparents were born in the same foreign country the soldier was counted to that country, otherwise as of mixed origin. Special regulations deal with the allocation in the case of some of the other problems of mixed ancestry. Comparative tables show the relation between the results obtained and those found in various national surveys in Europe.

The relationship between physique and various disabilities and diseases is set out in elaborate detail, each table being accompanied by lists of statistical constants.

It is clearly impossible to deal with a statistical work of these dimensions within the limits of a short notice, as the matters dealt with are so varied. It is shown that anthropological data are needed in relation not only to clothing, dietary, the classification of troops into companies which can use the same length of pace in the march and in the provision of suitable gas masks, but also to ensure a common psychology to a sufficiently large unit.

So far as like elements can be compared there seems to have been little change in the physique of the American during the past fifty years, the great change having

* Rivers, "Melanesian Gerontocracy," MAN, 1915, No. 85.

been the introduction of larger numbers of central South European elements. The tallest group are the mountain whites; the shortest, the French Canadians. The heaviest men came from Alaska, the lightest whites were the French Canadians. Of the European soldiers, the most variable were the Scottish, the least variable the Polish. Taking the build as a whole, the heaviest were from Alaska and the north central states, the Finns and the Scandinavians; of the Europeans the Poles are the heaviest in build and the Scots the most slender.

The data on hair and eye colour are somewhat disappointing, as the items were omitted from the first schedules. The northern states are the fairer, the European distribution corresponding to the usual figures derived from local data.

In relation to disease, tall men were found to be especially prone to varicose veins, pulmonary tuberculosis, cardiac disorders and goitre; short men, to defective teeth and visual disorders. Special associations were found between weight and tuberculosis, weight and mitral stenosis, stature and varicose veins. In the two former the disease would explain the deficiency in weight; in the latter, the extra pressure arising from the tall stature throws a special strain on the walls and valves of the veins.

Almost every conceivable aspect of the inter-relations of physique and environment and race is dealt with, so that the work will be a storage-house whence innumerable papers may be garnered in the future and it must find a place in every anthropological library.

F. C. S.

Folklore.

Fleming : Baskerville.

Stories from the Early World. By R. M. Fleming. With an Appendix by H. J. Fleure, D.Sc. With 4 colour and 8 half-tone Plates. London : Benn Brothers, Ltd., 1922. 156 pp. 15s. net.

6

The King of the Snakes and other Folklore Stories from Uganda. By Mrs. George Baskerville. Illustrated by Mrs. E. G. Morris. London : S.P.C.K. 1s. net.

In the good old times many things were better than now, but when we compare the books that are written and published to-day for the benefit of the young we cannot fail to envy the present generation. Lucky youngsters! When we were children, the ever-fertile and ever-prim imagination of some elderly ladies was tapped for our benefit; now the treasures of folklore of all times and all peoples are the source from which experts draw priceless treasures for the delectation of the young. "*Stories from the Early World*" have been carefully selected by Miss Fleming from the ancient tales of the Egyptians, Arabs, Chinese and others, and are retold in a fascinating form. The illustrations are beautiful, and are the products of the art of the same country whence the story comes. Thus the modern child, while it is following with bated breath the fate of kings, princes and shepherds of long-ago, learns to take an intelligent interest in folklore, archaeology and ethnography. Professor Fleure, in the Appendix, points out better than any reviewer could do the immense service that this book can render to teachers of history and geography: it will furnish the teacher with inspiration and the budding anthropologist's interest will be roused for what is, alas, still the most unpopular science.

"*The King of the Snakes*" contains a series of charming stories from Uganda and shows us what Uncle Remus was like before he was transplanted to strange countries. It will appeal greatly to the children and is of some interest to adult folklorists. The illustrations are amusing.

It is to be hoped that these books will meet with the appreciation they deserve, and that their success will induce the publishers to produce more of their kind.

E. T.

Africa : Linguistics.

Crabtree.

Primitive Speech: Part I. A Study in African Phonetics. By W. A. Crabtree, M.A. 1922. S.P.C.K. 5s. 7

This little work deals with the phonetics of rather less than twenty Bantu languages, ranging from Zulu and Herero in the south to Duala and Kavirondo in the north. The root idea is to "take some word in its African sense . . . and "see what forms it assumes." There is neither index nor table showing the system of transcription; as Mr. Crabtree departs widely from accepted terminology, the result is confusing; he says that ng' is a "velar nasal corresponding to velar 'g' and " . . . arises usually as a stressed form of 'ng' the nasalised form of 'g'"; what is the difference between ng and ng'? Ng is also termed "the stressed form " of 'm'"; and the suggestion is added that a flattened nose gave *extra* capacity for nasal sounds; does an enlarged nasal resonance chamber accompany a flattened nose?

Many of the author's speculations are vitiated by a disregard of first principles; on the strength of Kamba *tula*, Ganda *tuga*, he lays down the equation $L > G$, but where is the proof that one form was derived from the other, or that both do not go back to a third form?

Mr. Crabtree has something to say on tones; but he confuses phrase-tone and word-tone (p. 36), and (p. 18) identifies tone with stress and with length; in fact, definitions are not his strong point, witness his description of the vowel 'a'; it "consists in opening the mouth and, with the tongue lying level on the floor of " the mouth, making a sound a-a-a neither high-pitched nor low-pitched, but of a " light, even, medium quality." Even if phoneticians did not distinguish front and back "a" this would not be very enlightening; what is a "light medium quality" and what on earth has pitch to do with the matter?

The author lays down that "Bantu belongs to a very elementary stage of " language. In this period the vowel originates in an unstressed sound, so toneless " that it requires strengthening before it can pass into intelligible speech. The " consonants likewise begin from feeble sounds." Yet he assumes a relation between Bantu and Sumerian, and even Hebrew; to suppose that a language was written before it was spoken intelligibly is a paradox; but this appears to be the meaning of the text. Mr. Crabtree explains in his preface that he abandoned Meinhof's method as not sufficiently helpful; he may be happy if Meinhof has nothing worse to say of the lines on which this book is written. N. W. T.

ANTHROPOLOGICAL NOTES.

Local Branches of the Royal Anthropological Institute.—Many of the 8
Fellows of the Institute who reside at some distance from London, find it difficult or impossible to attend the evening meetings, and are thereby deprived of one of the chief advantages of their membership. In order to meet their need for a meeting place for the discussion of anthropological subjects, the Council has recently framed rules under which branches of the Institute may be formed in any locality from which not less than eight resident Fellows have made application to the Council for the formation of such a branch. The main object of the branch will be to stimulate interest in the science of anthropology by holding meetings for the reading of papers, and at the same time to endeavour to forward research in any branch of anthropology for which the locality may afford opportunity. The expenses of the organisation and administration of the local branch, not exceeding a specified amount, will be borne by the funds of the Institute.

A local branch on these lines has already been formed for Edinburgh and the Lothians. At a meeting held at Edinburgh on 2nd November the following were elected officers of the branch:—*Local President*, Lord Abercromby; *Local Vice-Presidents*, Sir Everard F. im Thurn, Professor A. H. Sayce, Sir P. Hamilton Grierson, Robert Kerr, Esq.; *Local Treasurer*, David MacRitchie, Esq.; *Local Secretary*, Captain A. G. Pape.

It is hoped that Fellows resident in other localities will avail themselves of the opportunity to form local branches. Not only will it thus be possible for them to meet for discussion, but the existence of organisations of this type in various centres should stimulate interest in the science, encourage anthropological investigations and serve, through the publications of the Institute, to keep anthropologists more closely in touch with the work which is being done in different centres throughout the country. Copies of the rules governing the formation of local branches will be forwarded to Fellows on application to the Assistant Secretary at the offices of the Institute.

Proceedings of Affiliated Societies.—During the past term the following communications have been received by the Oxford University Anthropological Society:—26th October, Miss W. S. Blackman: *Village Life in Modern Egypt*; 9th November, Professor C. G. and Mrs. Seligman: *The Latuka-speaking Tribes of the Sudan*; 23rd November, Professor Sir Archibald Garrod: *Islands (Presidential Address)*. On 7th December a meeting for Members only was devoted to short communications and exhibits.

The Spelæological Society of the University of Bristol has continued the exploration of the Mendip caves during the past summer. Messrs. Tratman and Davies gave an account of the finds of Palæolithic and Iron Age date at the meetings of the British Association at Hull in September.

Vol. II. of the Proceedings of the Society published at the end of the session 1921–22, contains an account of the exploration of Aveline's Hole, Burrington Combe. The finds consisted of burins, gravette and chatelperron points, knives, scrapers and awls. A number of drilled shells of *Neroita obtusatus*, recall similar finds in Upper Palæolithic burials such as those of Crô Magnon and the Grottes de Grimaldi. The most notable find was a double rowed six-barbed harpoon, which the Abbé Breuil has pronounced to be Upper Magdalenian 6b. These finds were made in a layer of 3 feet of red cave-earth, which underlay humus varying from half an inch to a foot in depth and a layer of stalagmite. The implements are assigned to early Tardenoisian or late Magdalenian. The harpoon, which was found in the first foot of cave-earth excavated, is, it is suggested, due to culture drift, thus accounting for its superposition in relation to the Tardenoisian implements. A number of human bones were found, which are described in detail by Professor E. Fawcett; while Professor E. T. Newton, F.R.S., contributes a note on the remains of birds discovered. Among the other papers are an account of the exploration of Rowberrow Cavern by W. H. Taylor, and a second report on the Keltic cavern by L. S. Palmer.

During the current term the Society has received a number of communications at its meetings, including papers by Dr. Palmer, on *The Prehistory of Gravel Terraces in relation to Cave Deposits*; Professor Fleure, on *The Races of Britain*; Professor S. H. Reynolds, on *Cave Formation and Mendip Geology*. In the coming term D. C. Fox will address the Society on *Regional Archaeological Surveys*; Mr. L. W. G. Malcolm will deal with *The Invention of the Art of Iron-working*, and Dr. Haddon will speak on *The Races of Europe*. The Presidential Address will be delivered by Professor Fawcett on 15th February.

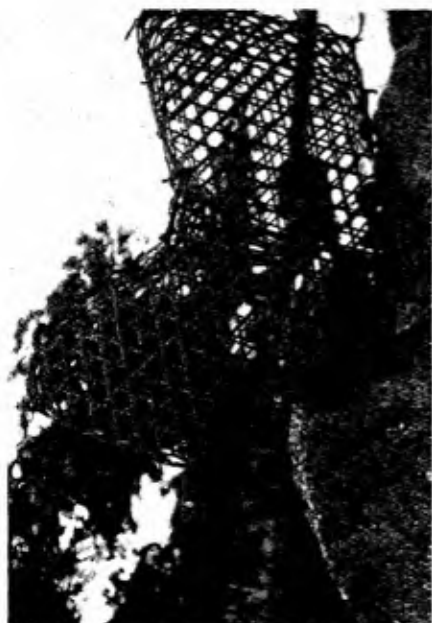


FIG. 2.

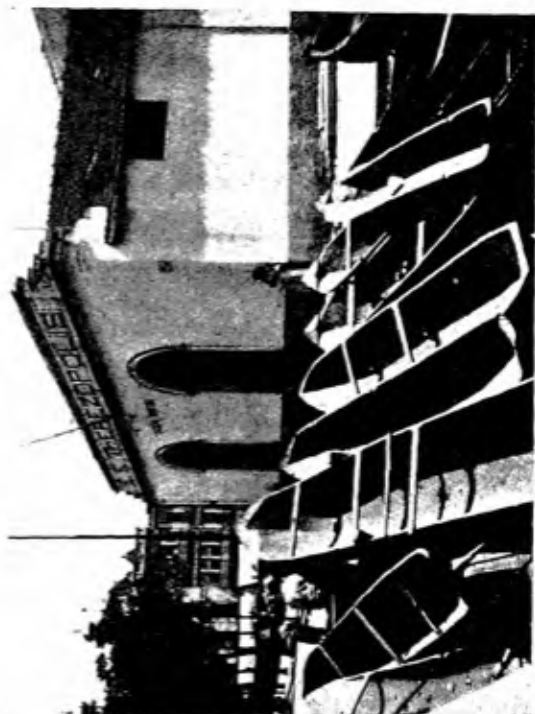


FIG. 4.

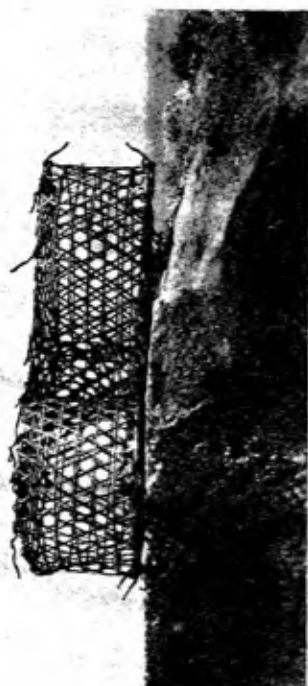


FIG. 1.



FIG. 3.

FISHING IN THE BAY OF RIO DE JANEIRO.

ORIGINAL ARTICLES.

With Plate B.

Brazil: Fishing.

Clark.

Fishing in the Bay of Rio de Janeiro. By Major J. Cooper Clark.

9

Of the many delightful excursions, planned and carried out by the Brazilian Government for members attending the XXth International Congress of Americanists, one was to the beautiful island of Paquetá. Here fishing is carried on both with nets and with creels. The latter (*cóvos*) are made from strips of the palha de ubá, woven in an open pattern and bound by thongs of cipó imbé, a liana which grows in the district around Capo Frio. The accompanying photographs (Plate B) show the form and construction; the measurements are 100 × 50 × 27 cm. The entrance is formed of five rings of 23, 18, 14, 12 and 11 cm. diameter respectively, to which the canes are bent inwards, ending in 13 slips, and into each is inserted a spike 17 cm. long. These spikes can be adjusted or replaced if broken. This type is called *narça de agulhas*, and considered better than the *carapuça* type, which has merely an oblong opening and no spikes. The sinkers are small stones, pieces of broken white crockery, and oyster shells, and the bait sardintas or bacalão.

When the creels are set they are taken out, early in the morning, in a dug-out (*ubá*) to some previously selected ground, usually banks off the island such as I. do Lobo, a small rock off the W. shore, Folhas at the S.E. end, or Tapacys, S. of the Island. The last mentioned is a group of rocks with scanty vegetation, and a light on it. Arriving at the ground, which may either have a sandy or rocky bottom, the creels are cast off in sets of twelve. First the sinker, in this case a lump of granite weighing about 15 lbs., is dropped with a fair length of line (twisted cipó imbé) to the first creel. The length of line between each creel is 3 m. 18 cm. All 12 creels are, of course, attached by a short hemp cord to the main line and let down, one after the other, along the bank, lying on their sides. Coming to the last creel there is a further length of line ending in another sinker, which is also dropped. The creels are left out for two or three days, and as they have no buoys to mark their position, the fisherman has to drag with an anchor for them. The catch is very varied and may include lobster, sardintas, badejó (bacalão), garopa and, occasionally, an octopus. These are sent to Rio de Janeiro, where they are speedily disposed of. The best season is in summer (February–May), but fishing is carried on throughout the year. It is remarkable that the fishing industry should be still carried on in dug-out canoes (Pl. B., Fig. 4, and Fig. 1) carrying a small sail, but unable to go to sea. Fishing



FIG. 1.

boats, as we know them, are unknown. Fishing creels are no longer made locally, but are purchased in Rio at a cost of \$90,000 the dozen, or £2 14s. at present exchange.

J. COOPER-CLARK.

Europe: Archæology.

Brooks.

The Age of the Chalky Boulder Clay. By C. E. P. Brooks.

10

The present tendency seems to be to emphasise archæological evidence in the correlation of Quaternary stages and to ignore other evidence. Some light can be obtained on the age of a glacial deposit by two other criteria: (a) the amount of weathering it has undergone, (b) direct stratigraphical correlation.

(a) The amount of weathering undergone by the Chalky Boulder Clay and associated gravels makes it almost impossible to believe that it is as recent as the Würmian deposits of Europe, which are weathered to a depth of only 3 or 4 feet. Taking the exposure at Hatfield as a typical example, we find that all the chalk has been removed from the top few feet of the clay, and weathering extends through almost the whole thickness. Near the surface erratics of granite larger than a hen's egg, while still retaining the external appearance of pebbles, are so fragile that they crumble to powder at a touch. Also the original surface of the Chalky Boulder Clay has largely been destroyed by erosion, so that it is now more a series of isolated occurrences than a sheet.

The Newer Glacial deposits of northern England have a much more recent appearance. The deposits near Bridlington, for instance, present a rough, hummocky surface, with small lakes in the hollows, and the igneous erratics are not appreciably weathered. Still younger in appearance are the latest glacial-deposits in Ireland, e.g., the youngest moraines in Barnesmore gap, which are completely without trace of weathering. The inference that the Chalky Boulder Clay is pre-Würm is very strong. The same point was noticed by the American glacialist F. Leverett, who carried out a tour of inspection of European deposits, and on the score of weathering alone classed the Finchley boulder clay as Mindelian.*

(b) The direct stratigraphical evidence is more difficult to interpret. The following table shows the sequence in (1) the North German Plain, (2) the Lower Rhine Valley and Holland, (3) the Alps. (1) and (2) can be correlated by the Interglacial deposits, (2) and (3) by the Rhine terraces.

	North German Plain.	Lower Rhine Valley and Holland.	Alps.
I. Glacial ...	—	Lower Gravels of Rhine with occasional northern erratics.	Günzian.
I. Interglacial	—	Plant-bearing clays of Tegelen	Günz-Mindel.
II. Glacial ...	Lower Diluvium	Moraines of Maximum Glacial of Holland.	Mindelian.
II. Interglacial	Eem Clays. Beds with <i>Paludina diluviana</i> and <i>Corbicula fluminalis</i> .	Eem Clays	Mindel-Riss.
III. Glacial ...	Middle Diluvium	Moraines resting on Middle Terrace of Rhine.	Rissian.
III. Interglacial	Rixdorf Mammal beds. <i>Corbicula diluviana</i> .	—	Riss-Würm.
IV. Glacial	Upper Diluvium.	—	Würmian.

* Zs. Gletscherk. Berlin. 4, 1910.

The correlation is quite reasonably secure in each case. Now, in Eastern England the Cromer Forest Bed is equivalent to the Tegelen plant-bearing clays, and therefore corresponds with the Günz-Mindel stage (I do not like the word "Interglacial" here). The North Sea Drift at least is, therefore, Mindelian in age. The important question now arises as to whether there was an interglacial between the North Sea Drift and the Chalky Boulder Clay. If there was not, the latter is also Mindelian; if there was an Interglacial, the Chalky Boulder Clay is Rissian.

When I first worked out the relationship of the British and Continental deposits in 1914-1915, I considered the former to be the true correlation* and on re-consideration I am still inclined to this view, but admit that proof is difficult.

I see that Mr. H. J. E. Peake† places the Chalky Boulder Clay later than the Middle Terrace of the Thames, but there is some evidence that the Boulder Clay is older even than the 130-foot terrace.‡ The high and middle terraces of the Thames valley are closely paralleled by the upper and lower raised beaches of the Sussex coast,§ both connected with cold periods, but with an intervening mild period, and the lower beach connects up with the Seine valley and hence with the Alps. The high terrace is thus shown to be Mindel and Mindel-Riss. This supports the Mindelian age of the Chalky Boulder Clay. Both (a) and (b) thus point very strongly against the possibility that the Chalky Boulder Clay can be of Würmian age.

There is one point about Mr. Peake's scheme which calls for remark, and that is the association of the 25-foot beach in Scotland with the corrie glaciers. In north-east Ireland the 25-foot beach is associated with a fauna warmer than the present, and the corresponding beach on the opposite coast of Scotland must be of the same age.

C. E. P. BROOKS.

Balkans: Ethnography.

Durham.

Head-hunting in the Balkans. By M. Edith Durham.

Head-hunting, studied usually in distant lands, flourished in Europe well 11
into the middle of the 19th century and is not yet quite extinct. When I travelled in Montenegro at the beginning of the present century all the elderly men could, and did, tell tales of the heads that they or their friends had taken. My guide confessed, with shame and humiliation, that he had not taken a single one in the war of 1877, pleading that he was only seventeen, and was severely told that others, even younger, had done better. Every man in earlier days went to war or to a border fray intending to take as many heads as he could. The short heavy "hanzhar" was used for the purpose. Never for stabbing. An expert severed the head at one blow. If two Montenegrins both wounded the same man, the head "legally" belonged to the man who took first blood. I was told of cases in which a dispute followed about the head and that the rival claimants have been known to fight each other for it to the death. The reasons for head-taking were given as "to show how brave you are" and "to shame the enemy." I gathered that it was also supposed to affect the future life of the enemy. But whether it would prevent it altogether I could not learn. That it was formerly believed to do so seems probable, as I heard grisly tales of heroic women who crawled over the border at night and, with danger and difficulty, brought back their husbands' heads in order to bury them with the bodies.

Blood vengeance raged between Montenegrin, Turk and Albanian, and for one head many would be taken. The heads were tied by the lock of hair left on them to the neck or belt of the warrior. A Ragusan lady gave me her grandfather's

* Ann. Rep. Smithsonian Institution, 1917, pp. 277-374.

† MAN, 1922, 5.

‡ Sherlock and Noble in *Q. J. Geol. Soc.*, 1912, p. 199.

§ C. Reid in *Q. J. Geol. Soc.*, 48, 1892, pp. 344-364.

vivid account of the horror produced there when the Russians enlisted Montenegrins to fight the French troops during the Napoleonic wars, and how the wild inrush of yelling Montenegrins, with decapitated French heads dripping and dangling from belt and neck, struck terror into Napoleon's hardened troops. Till recently the heads of all Serbs, Montenegrins and Albanians were shaven and a long lock, plait, or two side tufts only left. The reason popularly given for this custom was that if the head was completely shaven the only way to carry it was by hooking your finger in its mouth. If you were a Christian you would not like a Moslem finger stuck in. Nor would a Moslem like an unclean Christian finger. Hence a handle was left. The reason is improbable, but the tale is of interest as showing that a large proportion of the people were accustomed to the idea of having their heads carried away! The mediæval ballads of the Serbs give plenty of examples of head-cutting and narrate mainly the slaying of chieftains by chieftains. To realise the wholesale head-taking of recent times we must refer to the ballads of Grand Voyvoda Mirko, father of the late King of Montenegro, who gives very precise details. Thus, in "The Slaying of Chulek Beg, 1852," after the fight they "counted out three hundred Turkish heads. Among them that of Chulek Beg . . . Off went the Serbs singing "and carrying Turkish turbans and glittering clothing and the Turkish heads on "oaken stakes and Chulek's head among them."

In the fight at Drobnjak, 1855, "As the Turks rushed from the burning tower "the young Montenegrins seized them and cut off the head of each. And lo and "behold the three Mladitches, carrying dead Turkish heads . . . and they "said to Serdar Bogdan of the frontier 'Here, O Serdar, have we cut off for thee "fifty Turkish heads and taken all their clothing.'"

In the "Slaying of Betchko Agimanitch" to avenge one Montenegrin twelve Turks are killed. "Then with the Turks' clothes and weapons and the heads "upon oaken stakes they marched back to the village of Markovitch and set up "eleven heads before the white tower of the Serdar and Betchko's head they carried "to Cetinje to the tower above the Monastery where up till now many Turkish "heads have been impaled and a many more shall be, God willing,—heads of Pashas "and Vizirs, of Agas and Begs . . . A fine booty was this of Serdar Scepan "and great honour did he gain. God grant him long life!"

Sir Gardner Wilkinson, who went as British Envoy to Montenegro in 1848, broke it gently to Prince Nikola (as he then was) that the sight of so many heads on a tower in the capital was unpleasant to British envoys. But the practice continued and a dried head was kept in the Monastery after public exhibition had ceased.

In "The Avenging of Pope Radisav" we find thirty-three heads taken to avenge one man. "They cut off thirty-three heads. Not the devil a one did they let "live . . . And they went to Bijelopavlitch, above the bloody town of "Spuzh [then in Turkish possession], carrying the heads on stakes, and stuck them "up that the Turkish wives and women of the town might see them and know "they were a monument to Pope Radisav. May the ravens and crows claw the "heads and the foxes tear them!"

These were border frays. More serious work was put in at Kolashin in 1858. Here, 1,000 heads were cut off. "I was on Kum mountain and I saw it myself," adds the poet proudly. In the Slaying of Selim Pasha in 1862, 1,600 heads are taken, including those of the Pasha and his two sons, and carried in triumph. In the fight at Nikshitch the same year the score is 3,700. It is noteworthy that a share of the booty, some fine swords or horses, were usually sent to the Prince (the late King of Montenegro) after every big affair. That the heads were cut from dead bodies and from the wounded is shown by "The Fight at Martinitch, 1862." "By "the time they had driven the Turks back on Spuzh they had cut off 600 heads,

"and mortally wounded 1,000 men whom the Turks carried away that the Serbs might not cut off their heads too."

The last heads that I heard of as being cut off were those of three Montenegrins killed in a border fight just preparatory to the first Balkan war in August, 1912. I spoke with a nephew of one of the decapitated. He took it very calmly and seemed to think it might happen to anybody's uncle. During the war which followed nose-taking was substituted by the Montenegrins for head-taking and a great deal went on. I saw nine of the victims. The nasal bone was hacked right through and the whole upper lip removed as well as the nose. The trophy was carried by the moustache. It is only fair to the Turks to say that I did not see or hear of a single case of a mutilated Montenegrin. The practice was to go round the battle-field and cut the nose, and in some cases also castrate, the wounded, who usually died of the additional shock and hæmorrhage.

The desire to take a trophy was so great that a wounded Montenegrin whose hands were disabled would sometimes seize his enemy's nose with his teeth and try to bite it off. A Montenegrin gendarme told me how, in the war of 1877, he had thus made a supreme effort, had been cut down, and on recovering consciousness in a Russian field hospital found, to his intense joy, the nose in his breeches pocket, a friend having generously cut it off for him!

I once stopped a terrible fight on the road between Cattaro and Njegos, in which one man had his teeth firmly fixed in the other's nose and was hanging on like a bulldog, while the blood dripped freely from the ends of his enemy's long moustache.

Turning to the best collection of old Montenegrin ballads, Ogladalo Srpsko, we find many more examples of head-taking, and further confirmation of the fact that the dead heads were worn by the triumphant victors. Thus in "The Slaying of Bechir Beg Bushatli," "the Krajitchnitzi, those grey falcons, charged down on the rest of the Turks and cut off fifty heads They then turned back towards home decked out with Turkish heads and many Turkish weapons and they carried the heads to Cetinje and ornamented Cetinje with them." This in 1839. In the case of mighty Pashas I was told it was sometimes customary to salt the head to make it keep the longer.

I could multiply instances, but have given sufficient to show the ardour with which head-hunting was pursued in Europe, within five days of London, during the lifetime of many of us.

M. EDITH DURHAM.

America, North: Ethnography.

Parsons.

The Hopi Buffalo Dance. By Elsie Clews Parsons.

The Buffalo Dance (*musheöshñih*)* was danced at Sichumovi on Saturday and Sunday, 20th-21st November. The days of the week happened to be important because the little children, the school children, were to dance the first day; the second day was for the older girls and boys. I reached the mesa after the conclusion of the first day's dance. About seven o'clock we heard an announcement called from a house door near by. "That is your father calling to come to the kiva," said my host. Sihtaime, of the *patki* clan, *soyala mungwi*, chief of the winter solstice ceremony, is my "father," his own sister and several clan sisters having washed my head and given me *patki* clan names. Sihtaime was the head or chief of the dance (*musheösh mungwi*) because, I was told,† he had assembled the men for it, an act volunteered.

Presently two of the men engaged, G'awehtima, the husband of Sihtaime's father's sister's daughter (and chief of the *wöwochim* ceremony and of the *salako*

* *Mushaiasti*, according to Fewkes. My informant, a Tewa, speaks Hopi with a foreign accent. For one thing *s* he pronounces *sh*.

† But see p. 26, where a less fortuitous connection is suggested.

kachina performance), and another younger man, together with a small troop of the very little boys who had been dancing that day, came into our house to invite the fourteen-year-old daughter of the house to join in the dance and the evening's practice. G'awehtima had the function of assembling the girl dancers, and collecting their dance paraphernalia. The party of men and boys went on their rounds, and half an hour later our girl was fetched out by another girl; but not until ten o'clock did we all start down the ladder of the kiva, Stove (*sivaköyphkä*) or Meat-eater (*nöksuwa*) kiva.* There are two kivas in Sichumovi—one associated with the *patki* clan, and one with the Mustard clan. Since Waji, the man who suggested having the dance, was a Mustard clansman, his kiva was being used.

"You may sit with the girls," I was directed; and, as I started to go down the ladder, one of the young men in the chorus joked, "Are you going to join the dance?" There were nine girls sitting on the banquette (Fig. 1), and later two Navajo, a girl and an older woman, squatted down at the end of the line, next to where the men were crowding in. Navajo females and Hopi alike kept their

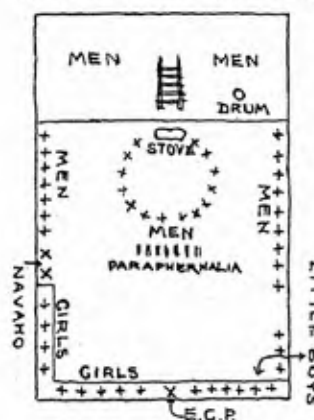


FIG. 1.—STOVE KIVA.

blankets well up over chin or nose, sometimes covering their mouth with their hand; but the Navajo woman carried on a lively flirtation of nudges and glances with the Hopi youth next to her, in contrast to the consistently demure behaviour of the Hopi girls, who sat for the most part sidewise, their faces averted from the general company. The girls whispered now and then to one another and even giggled, but direct attention to the company of men and boys they withheld. There is evidently a very marked etiquette of behaviour and posture to be observed on the part of the girl participants in these so-called girls' dances.

For an hour or more the men "practised their songs" around the drummer (Fig. 1), who was a Bear clansman from Hano. But for a brief, high-stepping, capering dance at the outset by four men on their descent into the kiva, there was no dancing. These four dancers sat along the south wall, continuing the line out from the chorus circle. Whether their initial performance was a fortuitous ebullition or had a ceremonial significance I did not learn. The drummer was a Tewa man married in Walpi. He and a younger man alternated in leading the singing. The young man would stand when he was conducting, and his gesticulations were vigorous, amounting to an arm dance. There were fifteen or more men in the chorus, and from thirty to forty crowded in behind the ladder and to the north side of it, most of these men joining now and again in the singing. Even the little boys grouped down in the south-west corner sang to the dancing. In a circle in the middle of the kiva sat some of the older men, for the most part smoking. Sihtaime sat here, and G'awehtima, when he was not busy elsewhere.

The circle to the west was kept open, and here on the ground G'awehtima laid down the dance paraphernalia—two gourd rattles painted white with crosses in black (Fig. 2A), and two lightning sticks (*talawepiki*) (Fig. 2B), one of each for each of the two male dancers, and four ritual sticks, *musheösh paho*, buffalo prayer-sticks (Fig. 2C)† for the female dancers, one in each hand of each of the two dancers.

* It was the first kiva to have a stove. The Mustard clan (*asnyamö*) of Sichumovi are said to have built it. Magpie (*posiwa*) is one of their names, and Magpie is a meat-eater.

† Fastened to the stick were a stiff eagle feather and some wisps of sage (*könya*). The handle was wrapped with cotton twine. "Sun ladders," Dr. Fewkes says these sticks are called. ("Hopi Kachinas," pp. 43, note a, 93, XXI, *Annual Report, Bureau American Ethnology*.) They are kept in the same place, I learned, as the sun placques. (See p. 24, note†.)

At the conclusion of each dance, the dancers laid their objects down on the ground; but, in preparing for the dance, while the young men picked up their objects, G'awehtima picked up those belonging to the girls. G'awehtima was also occupied in matching dance partners. From each girl dance couple he would learn the names of the young men they chose as partners, and would then communicate with these young men in the crowd around the ladder. There was considerable discussion at times with the girls, of a natural and unembarrassed kind. Probably G'awehtima was making suggestions; but, on the whole, he seemed to be merely the girls' messenger. It was the girls who did the asking.

About half the girls had their hair whorled and were wearing the native cloth dress; the others wore an American cotton dress, and a braid down their back. All wore shoes, which were taken off to dance. The dance was in three parts, just as it was the following day in the open, and it lasted about fifteen minutes for each set of four dancers. As there was an odd girl, one of the other girls repeated with her. In several instances the dancing of the young men did not please members of the chorus, and they would step out and show how it was to be done, with more spirit. At times in the song shouts or yelps were in order, given by everybody in the kiva but the girls. At these moments there was quite a pitch of excitement. In fact, throughout the affair there was more personal expression by all concerned than I have ever seen in a public dance.

While the last set were still dancing G'awehtima sent the other girls up the ladder, and home. It was a careful piece of chaperonage. Then the last two girls to dance went up with G'awehtima, who gathered up the dance paraphernalia; the drummer went up and the rest of us, and all dispersed, past midnight.

It was 11 a.m. before the first set of dancers appeared. They came out of, not the kiva, but the house of Waji, or rather of his mother, on the west side of the plaza. As they came out of the door, male, female, male, female, one behind the other, Polisi, a son of the house, sprinkled the head of each of the four with corn meal. This man represented the family associated with the dance, i.e. the family of Waji,* who had asked for the dance originally, and the day previous had asked for this day's repetition. He then took his stand to the right of the drummer; to the left stood Sihtaime, and back of them the chorus of G'awehtima and five or six other men. The cheeks of G'awehtima and of some of the others were painted red, one man had two horizontal lines in red across the cheek bones. One chorister wore a buckskin kilt and a Navajo silver belt, but the others wore their ordinary work clothes. One old man had a crash towel for a *banda* and stuck into it was a paper flower. Another old man had fastened across his back the silk kerchief worn by women. Another man carried in his hand a *kwashü*, two eagle feathers with their quills bound with cotton (or wool?). This he had made for himself for the occasion "to make his voice sound good." The "real" *kwashü* (? Züñi, *ponepoyanne*) belongs to the *kalehktaka*, the war chief.

* Why Waji himself did not perform the rite of sprinkling I do not know. It occurs to me now that Waji may have been sick, and that it was his sickness in particular that was being exorcised. (See p. 26.) If so, it is probable that he was in his mother's house when the dancers visited it. Such would be the case, I know, in a *kachina* curing ceremonial at Laguna.

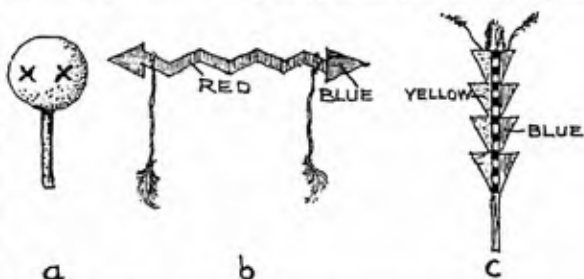


FIG. 2.—DANCE PARAPHERNALIA.

In contrast to the chorus, the dancers were smartly arrayed. They wore the native cloth dress, minus calico slip, their neck and arms bare, a small blanket—the kind worn usually by men as a dance kilt—was draped as a bodice, over which hung heavy necklaces, borrowed as usual from all the family connection. (Among the necklaces worn by the daughter of our house were a string of heavy turquoise descended from her mother's maternal grandfather and owned now by her mother's sister's son, and a Navajo silver necklace presented to her father by a Zuñi friend.) I recall the picture of her father engaged in fitting the necklaces to her while her mother fastened up the top wrappings of her mocassins and tied a band of porcupine quill over the heels. Around the waist was a ceremonial belt, i.e. the broad, heavily fringed cotton belt which is part of the bride's trousseau, and on the back of each dancer was a sun placque (*tawa ikwilni*),* a representation of the face of the sun girt with red horse-hair and eagle feathers (Fig. 3). The girl's hair in the back was left flowing, the bang falling over the face to the tip of the nose (Fig. 4),

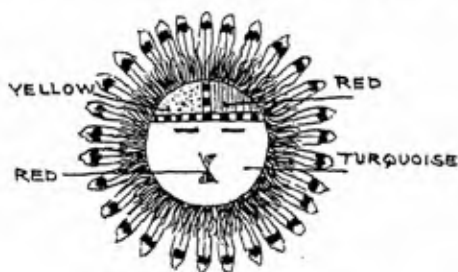


FIG. 3.—SUN PLACQUE.

FIG. 4.—
BANG AND
FACIAL MARKING
OF GIRL DANCERS.

just as Zuñi women performers in ceremonies wear their hair. As Hopi girls do not bang their hair, like the Zuñi or Keres or Tewa, this dance bang must have been artificial, and would of itself indicate a foreign origin† for the dance. On the top of the head was a large bunch of downy eagle (?) feathers, on the right side were the conventionalised cotton or wool squash blossoms common to Hopi masks, backed by a pendant of red yarn, on the left side at right angles some stiff eagle feathers. On each cheek, on a transverse slant,‡ were two conspicuous parallel stripes in black (Fig. 4). These lines were painted with micaceous hematite (*yalaha*) and called, as are such black lines on masks or on the face of the *kalehktaka* (war chief-priest), *kalehk'ma*. The rest of the face and the hands were whitened. Hanks of yarn were tied around the wrists and silver bracelets worn.

The feet of the boy dancers, bare but for fringes of buckskin, were whitened, and their legs blotched in white. (Several of the dancers to appear later wore trousers, the outer seams fringed with buckskin.) They wore a kilt of the white blanket bordered with red and black which the Zuñi female *kachina* impersonators

* Sun-on-back; anything carried on the back is called *ikwilni*.

† Perhaps Tewa. The Tewa of Hano were expecting to have the Buffalo dance (*koh ki*) for themselves this season. Cf., too, "Hopi Kachinas," p. 31.

There is a buffalo dance, *moshotsha*, at Cochiti. (Dumarest, N., "Notes on Cochiti, New Mexico," p. 183.) Mem. Amer. Anthropological Assn., vol. VI, No. 3, 1919: It is of interest that the Hopi word for buffalo is Keresan, not Tewa or Tanoan.

Incidentally I note that Dr. Kidder has recently excavated at Pecos, from the same room, a number of buffalo horns and of terraced tablets, hand pieces cut in the same pattern as the Hopi pieces. (Fig. 2c.)

‡ In the picture of the Buffalo girl in Pl. XXXI, *Hopi Kachinas*, the lines on the face are vertical, but as the slant is difficult to represent, this difference may be merely an error in drawing. Otherwise the figures of the Buffalo Girl and the Buffalo Boy in Pl. XXXI are very accurately drawn.

wear,* and bundled around the waist was the heavily fringed dance belt. The heavy wig with two small horns was of buffalo pelt. Downy eagle feathers were fastened over it, with a feather to each horn. From six to eight eagle wing feathers fanned out at the back of the wig. The face was blackened,† with white under the chin and across the lips. Across the forehead was a band of porcupine quill.

After this first set of dancers withdrew into the kiva, they were followed in about half-an-hour by another set, then there was an interval of an hour or more while dinner was served in the kiva from the house of the people who had asked for the dance. The day before Waji's mother and wife had baked *piki* or wafer bread in his mother's house, where clanswomen had gone to help.

In the kiva I had looked on at the preparation of the second set of dancers. The girls stood on the west side in the same place as they had occupied during the rehearsal. Two old men were engaged in taking from them or giving to them their dance paraphernalia, fastening or unfastening their sun plaques or their headdress, or handing them the paper bag of white paint to smear on their face. This bag, together with the rest of the dance equipment, was left on the ground on the west of the circle of smokers, as the night before. To-day a canvas cover was drawn over the floor on all the western part of the kiva. There was the same smoker circle and the same group round the drum. The men sang on and off. There was but little light in the kiva; the night before it had been lit up by two hanging kerosene lamps, and there were much tobacco smoke and a large crowd, so that the scene was quite as confused as that of any green room.

After dinner, at intervals of about an hour, five more sets of dancers came out. The drummer was always the first to emerge; he was followed by the chorus, then by the boy dancers, who at once began to caper about, and then by the girl dancers who were given their hand pieces after they left the ladder, to be relieved of them again at the close before descending. All danced along the short way leading to the plaza, the choristers closing in behind the dancers, singing and now and again yelping and gesticulating. In one dance a gun was shot off several times. By this progress to the dance plaza I was reminded strongly of the *hoinawe* or war dance I had seen danced at Acoma a few years before.‡ The main dance movement of the girls in the plaza was also reminiscent of the Acoma dance. While the boys scouted around, shaking their rattles, the girls stood side by side moving their feet sidewise, without lifting them from the ground. Their arms were extended at right angles, and at the long drawn-out notes of the song both were moved either to the right or left, as the dancer had been moving, with a quivering motion to end, as the long notes ended in shouts, with a gesture of throwing something over the shoulder. Now the boys jumped in front of the girls, and with body bent far forward performed a most spirited dance, stepping high, one hand at the hip, one raised above the forehead, in alternation. This whole movement was performed four times, the girls first standing to the south and facing north, then proceeding to the east to face west, and so on to complete the ceremonial circuit. At its conclusion the whole group began to move back to the kiva, dancing the first movement again, a movement in which the boys stepped backwards in front of and facing the girls, to be followed up by them, the girls in turn stepping backwards, all four then performing a Virginia reel turning movement to repeat the first movement. In this the gestures of all were from the waist downwards, the boys' gesture very sweeping.

* Part of the Hopi bridal outfit.

† In Pl. XXXI, *Hopi Kachinas*, the face of Buffalo Boy is also blackened. On p. 30 Fewkes refers to Buffalo masks seen in the Buffalo dance of 15th January 1900. In November masks would not be worn because no *kachinas* may appear until after the winter solstice ceremony.

‡ "Notes on Acoma and Laguna," *American Anthropologist* (N.S.), XX (1918), 162-71.

Towards the close of the last dance Waji's mother came out of her house carrying in her hand two *nakwakwosi*, the short feathered strings used in all Hopi prayer ritual, and two *pütäbi*, long feathered strings, a prayer specifically for a long road and life. By some one in the chorus (probably Polisi) the woman was told to wait until the group had danced out. They had danced about half way to the kiva when she was summoned to present the feathered strings to the male dancers. Then, as the dancers moved on, the choristers picked up whatever came to hand in the street to swing round their head, theoretically four times, and throw after the male dancers—the girls had withdrawn. This was an act of exorcism (*navohchiwa*, Zufi, *shuwaha*), the departing buffalo were to take away with them any "sickness" of the people.



FIG. 5.—BUFFALO PRAYER-STICK.

Drawn by native informant. The slab is painted white and black. The pendant feather is eagle, the erect feather is turkey, the plant is sage (*könya*)

Down a trail on the east side of the mesa the two buffalo boys disappeared on their way to the *kachina* home below, *kowaiwaimovee'*. There, like *kachina*, they would take off their headdress, in lieu of a mask, wave it in the usual anti-sunwise circuit around their head four times, and say to Buffalo, "You may go home."* They would lay down their feathered string offerings which were for the buffalo, and with a prayer for all the people they would conclude the dance.

As a dance people always refer to this impersonation of buffalo, as a girls' dance; they would not call it a ceremony or *wimi*, and yet it is not wholly a secular affair. (What is to the Pueblo Indian?) Besides the ritualistic features we have noted there are others—a buffalo prayer-stick (Fig. 5) is made during *soyala*, the solstice ceremonial, by the *soyala mungwi*, or chief, and offered up (where I did not learn), and the whole buffalo performance, like that of so many of the recognised ceremonies, is the dramatisation of a Hopi tradition, a *teöwichi*, as, without discrimination between myth or folk-tale, all traditional tales are called. This tale runs that once a buffalo† came to First Mesa with a buffalo girl. Buffalo and Buffalo girl taught the people their dance. Then Buffalo departed, leaving behind the Buffalo girl and taking away with him a Hopi girl—to the entire satisfaction of the people, the exchange was entirely proper‡.

ELSIE CLEWS PARSONS.

* When the *kachina* impersonator unmask after he has waved his mask and bidden the *kachina* go home, he also waves a pinch of ashes around his head four times, "so as not to dream about it." This, too, is *navohchiwa*. The *navohchiwa* act of throwing something after the departing buffalo impersonators is said not to be done in connection with the *kachina*. However, I saw it done on one occasion at Mushongnovi, as the *soyala kachina* was withdrawing from town.

† As Dr. Fewkes got the story, it was Sun who brought the Buffalo Girl to First Mesa, and that is why the girl dancer wears a sun tablet.

The association of Sun and Buffalo in the ceremonial and in the tradition is of interest from the point of view of provenience, since this association is common among Plains tribes.

‡ Comment on the exchange of girls suggested to my informant an account of an exchange of dances between First Mesa and Zufi. When Syikyatala was young (perhaps forty years ago), before he was married, he went with others to the Zufi Salt Lake. On returning they camped at Amusi, a spring north-west of Zufi, he said, and returned to Zufi to dance. They danced the Buffalo dance, but without girls and without headdress. The following year they returned to Zufi to dance, taking a girl with them and the buffalo headdresses. Similarly, Zufi men brought to the Hopi the *hoinawe*, the war dance in which the girls choose their mother's brother's sons to be their *kalehktaka*, or warriors. *Hoinawe* was last danced on First Mesa about 1912.

Pl. LXXXI, of "The Zuni Indians," 23rd Annual Report, Bureau American Ethnology, 1901-2, represents a girls' dance at Zufi, presumably a Buffalo dance without Buffalo headdress. The appearance of the girls is almost identical with that of the Hopi girl dancers.

Egypt: Archæology.

Murray.

Egypt: The Palæolithic Age. A Note on Dr. Seligman's Paper.*
 By G. W. Murray.

13

I write to support Dr. Seligman's opinion "that the full desert conditions, which "now prevail, did not do so then [*i.e.*, in early palæolithic times]"† by some description of the localities in which such implements as I did discover were found. At Hammama, nearly 200 implements, with a high proportion of ovates, were found scattered on hill-tops and terraces over an undulating area of several square kilometres. There was nothing to suggest that the site was a centre of manufacture—rather did I conceive it to be a favourite camping ground for the nomads of the period. But, under the present climatic conditions, no Bedouin would dream of camping on such hills, even after the heaviest of our rare downpours. In Wadi Dib, some 20 or 30 implements were found on a terrace beside a large watercourse—just such a site as might be selected for a camp nowadays. There was an outcrop of flint-bearing implements on the site, but so common are the flint outcrops in this portion of the desert, that I fancy the man of the period usually manufactured his implements as he required them from the nearest. The isolated find of four tortoise-cores, on the same terrace on which stands the Roman fort of El Heita, helped to strengthen this impression. No doubt special centres of manufacture also existed, but these were not found.

Some of the implements were found scattered beside the tracks which my caravan followed, and, although it would be easy to overstress the point, yet the sites of such springs as survive probably represent the largest and best water sources of an earlier period, and the tracks which connect these are doubtless of very great antiquity. One should regard the desert traveller of to-day not as a "pioneer blazing new trails," to use a journalistic metaphor, but as a "conservative" or "die-hard" preserving the old ones. The view (H. J. L. Beadnell's) put forward in the footnote on p. 141 that the implements found on the "high desert" were manufactured *in situ* by people from the Nile Valley in search of good flint, would seem to be negated, not only by the nature of the occurrences recorded above, but equally by the not infrequent occurrence of chipped flints in the sandstone and metamorphic areas bordering on the limestone districts, where they had no doubt been dropped by users. During the last field season, 1921-1922, I have collected a number of such specimens.

It may here be noted that the flint-containing limestones do not occur in the Eastern Desert south of lat. 25°—a fact even in our own days of some economic importance. During the recent war there was at one time a famine of matches in Upper Egypt, so much so that at Aswan, small pieces of flint fetched five piastres (1s.) each, and certain Ababda of my acquaintance were reduced to twirling a stick of *markh* wood (*Leptadenia pyrotechnica*) in the hole of another piece of the same wood till fire was produced. The Ababda do not know, or have forgotten, the "fire-bow," and say the wood of any bush which makes good charcoal for gun-powder will serve equally well for producing fire. Such are *ushr* (*Calotropis procera*), and *gurdi* (*Ochradenus baccatus*).

I make the foregoing remarks in general support of Dr. Seligman's view that the surface relief of the desert was in flint-using times much as at present; but that some proportion of humus or subsoil formerly existed on hills now bare, is apparent from the accumulation of flints in every stage of artificial and natural fracture,

and the boy dancers carry a lightning stick and a gourd rattle. For other references to girl dancers at Zūfi see Parsons, E. C., "Notes on Zuni," Pt. I, 175-8, *Memoirs American Anthropological Association*, IV, 3, 1917.

* "The Older Palæolithic Age in Egypt," *J.R.A.I.*, Vol. LI, 1921, p. 115-144.

† *Op. cit.*, p. 141.

which form the present surface without any sand or dust; below this, at the depth of a few inches, they occur much more sparsely distributed in fine loam or clay. This moderate depth of subsoil we may conjecture to have been removed by the aerial erosion of the past few thousand years. Dr. Seligman's discoveries in the gravels at Luxor prove an older series to have existed, such slight deposition as has taken place since the implements found by myself were abandoned, I suppose to have been removed by wind erosion. Mine are all surface finds.

My desert expeditions have all been undertaken for quite other purposes, and although I have searched many terrace scarps, I have not hitherto been lucky enough to find any of the older series *in situ*.

Dr. Seligman's comparison of the former state of the Eastern Desert, with the present southern fringe of the same on the Eritrean border, is fair, but one should bear in mind that the chalk and limestones do not occur so far south (lat. 18°), and that the igneous hills of the Eritrean frontier support in a *hot* climate an entirely different type of vegetation to that we may suppose our limestone hills to have sustained under a very slightly increased rainfall and perhaps *colder* temperatures. A closer parallel to the conditions necessary to support nomadic life in the Eastern Desert of Egypt may be found to-day in the Negeb of the Bible—that is, the country between the Wadi el-Arish and the Wadi Ghaza on the southern boundary of Palestine.

Here are the same chalk and limestone hills as are found at Hammama, Wadi Dib, Wasif, etc., differing only in rising from plains of rich alluvium, dusty and dry in summer and subject to wind erosion, but renewed each winter and covered with grass by the rains. At a little depth, very similar implements occur, to judge from a few finds now in the Cairo Museum. A very little further north, the chalk hills between Beersheba and Hebron are found covered with dwarf oak and scrub, and at Hebron come vines and olives.

The comparatively recent extension of this zone southward has been commented on by the unfortunate Professor Palmer (*Desert of the Exodus*, Vol. II), who records abandoned vineyards near Khalasa and Asluj on the present Sinai-Palestine frontier.

The rainfall in the area where I found the flint implements is at present in an ordinary year nil, but every five or six years perhaps there is a rainfall amounting in the high hills to two or three inches. Dews such as Dr. Ball (and Knox-Shaw following him) describes, occurred either in the S.E. Desert on the Sudan frontier, or in Sinai—both areas of greater precipitation. But I have no doubt dew and rain were more frequent in, geologically speaking, recent times. G. W. MURRAY.

REVIEWS.

Africa: East.

Hobley

Bantu Beliefs and Magic. By C. W. Hobley, C.M.G., with an Introduction by Sir James G. Frazer, F.R.S., etc. London: H. F. and G. Witherby, 1922.

14

Mr. Hobley is already well known to members of the Institute as the author of a monograph on Eastern Uganda, issued by the Institute several years ago. Since then he has been Senior Provincial Commissioner for what is now called Kenya Colony. His experience among the Kikuyu and the Akamba is very extensive, and some dozen years since he wrote a very useful little work on the Akamba and other tribes of the district formerly known as the East African Protectorate. The ampler work before us, though its title covers a larger subject, is chiefly concerned with the religious and magical beliefs and practices of the Kikuyu and the Akamba. It embodies the results of enquiries which he undertook unofficially in the scanty leisure of a hard-worked Provincial Commissioner some

years before the war, because he saw the importance, if not the urgent need, of fuller information on the tribal customs and psychology.

He has succeeded in presenting to the anthropological reader a mass of material of the most interesting and useful kind on these subjects; and it has been gathered from the most trustworthy sources—the tribal elders whose business it is to conduct the ceremonies and administer the tribal law. So well, indeed, did the Kikuyu take his interest in their institutions that at their invitation he became a recognised elder of the tribe, and was thus enabled to obtain full information, which could only be imparted to one of that standing.

It is to be regretted that Mr. Hobley has not been able to settle the question of the exact meaning of the word *Engai*, which has been regarded as the name for the high god of the Kikuyu. This agrees with his own opinion, an opinion entitled to great weight, though he frankly admits that it is not shared by his colleague, Mr. Dundas. It is hardly consistent with some of the uses of the word. When it is intended to cut down a tree, some beer is poured out by the Akamba at the foot of the tree, with these words: "We give this beer as a gift to the *Engai*, if one lives here, and ask him to go to another tree." If these words be accurately rendered they are obviously addressed to a local spirit dwelling in the tree, and not to anything like "a high God." A Kikuyu who was seized with a fit was given water on recovering consciousness. He poured out a libation of a few drops by way of thanksgiving, saying: "that it was his *muungu* who had attacked him thus." The word *muungu* or *mulungu* is a Bantu word of disputed meaning now frequently employed by the Awemba in the plural form *mulungu* for nature spirits. *Mulungu*, in the singular, is sometimes also prayed to for rain or other blessings, and then the word is used as an equivalent for *Engai*. Here, however, it seems to designate a divinity with special relations to the speaker. In the blood-covenant as practised by the Akamba of Kiki an appeal is made to *Engai*; but it is so little clear what is the meaning of the word here that Mr. Hobley admits that it is difficult to state with precision whether the "high God" or the ancestral spirits are meant. Women among the Akamba suffer from a kind of infectious mania in which they are supposed to be possessed by *Engai*. Mr. Hobley relates of one woman that after a sacrifice she announced that she would transfer the *Engai* to a particular village, and shortly afterwards a woman there was seized with the mania. It is with diffidence that I dare to suggest that *Engai* really and properly connotes not the "high God," but a vague form of supernatural power, such as is known among other Bantu tribes and has frequently been mistaken by white enquirers for a more definite deity.

The actual religion of these tribes, like that of nearly all Bantu, is ancestor-worship. Mr. Hobley describes it in some detail. Not the ancestral spirits, but *Engai* is believed to control the rain, which is of so much importance. The ancestral spirits are like those of other tribes in their continual hunger, which means that they are frequently demanding animal sacrifices. Where sacrifices are eaten by the people, they probably get no other opportunity of animal food, despite their predominantly pastoral occupation, and they are, therefore, sympathetic to the demand of the ancestors for a sacrifice. At any rate a ram or a goat is sacrificed on almost every excuse. A Kikuyu elder "usually sacrifices a ram every three months or so at the grave of his father." The sacrifice, the author tells us, must take place before sunrise; and he suggests that this is connected with the idea that ancestral spirits are more active at night, and therefore more appreciative of attention, and that they lapse into inaction with the sunrise. But how he reconciles the rule and the conjecture with the statement he has made on the previous page that "these sacrifices generally take place at about nine a.m.," which is certainly not before sunrise, I do not know. The sacrifices take place at some sacred tree or at the village shrine, the place depending on the occasion, whether a private sacrifice, or whether the whole community is interested. The village shrines are usually under a sacred tree.

Sacrifices for rain are addressed to Engai, for it is Engai, not the ancestors, who sends the rain. While generally the animal sacrificed is a goat or ram, a sacrifice for rain may consist of a hyrax. This is a whole burnt offering, no portion of the hyrax being eaten; the internal organs are burnt among the crops which are in danger from lack of rain, and the smoke is said to be pleasing to Engai, apparently both the sight and the smell of it.

One of the most interesting superstitions of the Kikuyu relates to *thahu*. This "is the word used for a condition into which a person is believed to fall if he or she accidentally becomes the victim of certain circumstances, or intentionally performs certain acts which carry with them a kind of ill-luck or curse. It is almost equivalent to the Polynesian word *Tabu*. A person who is *thahu* becomes emaciated and ill or breaks out into eruptions or boils, and if the *thahu* is not removed will probably die." This condition is attributed to the *ugoma*, or spirits of departed ancestors. Many illustrations are given of the superstition; and Mr. Hobley connects it with the European mediæval belief in the potency of a curse. This, however, does not cover all the meanings of *thahu*, because it may be incurred unwittingly or even accidentally. But both among the Kikuyu and the Akamba a dying man has power to lay his descendants under a special conditional or absolute curse. This belief, of course, is not restricted to these tribes, though it seems to be entertained with more than usual strength by them; and a dying father will apply it to preventing the sale of any of his property by his children, or constituting a kind of trust of property reaching their hands; or a child who has quarrelled with his father, and who dies, may, when dying, lay a curse upon the parent whom he blames. Dying wishes are seldom infringed, but the consequences of doing so may be averted by the aid of the elders. Other cases of *thahu* are generally relieved by the medicine-men. The subject, however, is complicated, and reference for details must be made to Mr. Hobley's exposition.

Twins are regarded as a great misfortune, and the belief extends not only to human twins, but also to those of domestic animals, apparently only when they occur the first time the woman or animal gives birth. Formerly twins were always suffocated and thrown into the bush. Now there is an alternative in giving them over to a man of another tribe or clan to bring up, as is done when a woman dies in childbirth. A curse rests upon the mother of twins, preventing the father from again cohabiting with her; but she is relieved of this by being handed over to another man until she has borne to him, when the husband takes her back after the sacrifice of a ram. Among the Akamba of Ula the husband returns the wife to her father, who pays back the marriage-price to him. She may then be married to another man; but in order to be free from the risks of her first husband he must be of the grade of an elder of council, who is not so liable to the incidence of a curse as a younger man. It seems, therefore, as Mr. Hobley points out, that she is still to some extent dangerous. The new husband becomes by the marriage the father of the twins, as ordinarily in patrilineal tribes, where a man marries a woman already a mother; and for this reason the twins are not put to death, lest their real father be sued by the second husband for their value. It is curious that the Akamba of Ula do not connect the twins with the weather, nor presumably with the sky, as most tribes do.

The position of smiths among the Kikuyu is remarkable. If any ordinary member of the tribe eat food in a smithy, he becomes *thahu*. If he enter a smith's hut and commit adultery with the smith's wife, while she is wearing the iron armlets that a smith's wife usually wears, he becomes *thahu*, and has to be purified by another smith by means of a ceremony which involves the killing of a sheep and the consumption of honey-beer. The smiths form a kind of guild into which a regular initiation is necessary. But there is one class which is, if not actually hostile to smiths, at least antipathetic. This class, the *Eithaga* (sing.: *Mweithaga*),

like smiths, is feared for its magical powers. Whether this reputation be the cause of jealousy between the smiths and the Eithaga does not appear; but at all events no Mweithaga ever becomes a smith. No Mweithaga may sleep in a smith's house, nor may a smith sleep in a Mweithaga's house, on peril of illness or even death. Nor may a Mweithaga sleep in the hut of a person belonging to another class, or else the inhabitants of the hut will become *thahu*. These customs seem to indicate that both Eithaga and smiths were originally equally foreign to the tribe, and as such under a *tabu*. Indeed, the tradition is that the smiths all came from Ithanga on the south-western side of Mount Kenya many generations ago, and became scattered throughout the tribe; and it should be noted, as some slight corroboration of the suggestion, that the Kikuyu have no tradition of the origin of iron or of its use.

More, perhaps, than most Bantu tribes the Kikuyu and Akamba present the result of an adoption and amalgamation of customs and beliefs coming to them from the outside; and they would probably repay a still closer investigation.

E. SIDNEY HARTLAND.

Bohemia: Archæology.

Schránil.

Étude sur l'Origine de l'Âge du Bronze en Bohême. Par Dr. Joseph Schránil, Conservateur-adjoint du Musée National à Prague. Prague, 1921. Pp. 117, with illustrations and 7 plates. **15**

One of the most hopeful signs of the new Europe is the energy with which the archæologists of the new countries are providing themselves, and the rest of the world, with information on their past history, and the materials for reconstructing their prehistory. In this volume Dr. Schránil has gathered together all, or nearly all, the material available for deciding how metal was first introduced into his country.

His conclusions are that the arrival of the new knowledge, mainly in the form of copper tools, effected no appreciable change in the population, as it resulted from the arrival of traders from the south-east, perhaps from Transylvania, coming either in search of precious metals or passing through on their way to the amber coast of the Baltic.

As the Copper Age was passing into that of Bronze there was an invasion from the north by a people who introduced the Únětice culture. He describes the culture of the invaders at considerable length, including their burials and the contracted position of their skeletons, but gives no hint as to the shape of their skulls.

The illustrations give an excellent idea of the bronze axes, daggers and pins in use in this area during the first half or two-thirds of the Bronze Age, but readers in this country would like to know more of the nature of the pottery and the physical traits of the people.

The work is in Czech, but, fortunately for those who, like the reviewer, are ignorant of this tongue, there is a very full summary in French, and many of the illustrations speak for themselves.

H. J. E. P.

Africa.

Harvard University.

Harvard African Studies. Vol. II, 1918. Vol. III, 1922. Cambridge, U.S.A. **16**

All students of matters African will welcome the appearance of volume three, which, following its predecessor after a lapse of four years, gives us the assurance that this invaluable series is not to perish untimely.

The two volumes together make nearly 700 pages and include six long articles—one of them 220 pages—and a number of shorter ones, besides the 1916 bibliography of Africana. It is, therefore, out of the question to attempt a detailed survey of the material here laid before us. Two papers, by Giuffrida-Ruggeri and Reisner, are concerned with ancient Egypt, one with prehistoric collections from N.W. Africa, one with the pottery of Algeria and Tunis, with a subjoined note on Siwan pottery.

These may be classed as archaeological. Two more—those on double-bladed swords of the W. Coast and on Bisharin baskets—are concerned with material culture. Of the remainder, two are somatological and two ethnographical—the Kabâbish, by Dr. and Mrs. Seligman, and the Wayao, by Dr. Stannus. Folk-literature (of the Galla) occupies an important place and there is a valuable discussion of points of resemblance between the Zulu and Spartan military systems, in which the author, not unnaturally, concludes that chance coincidence accounts for the parallelism. Finally, A. W. Hoernlé gives us a valuable account of rites of transition (*rites de passage*) and *Inau* (tabu) among the fast disappearing Hottentots, with early drawings of whose women, showing steatopygia, etc., E. A. Hooton deals. In connection with the latter article it may be noted that the great extension of the areola is not confined to Hottentot and Bushman women, but is also found on the West Coast among true negroes. In the Benin article, the *ebē* (termed *ebere* in vol. I, p. 142) is termed a "beheading knife," on what authority does not appear; it is certain that the *ebē* would double up if it were used for any such purpose; it was used by chiefs in dancing.

Perhaps more controversial points are raised by the Kabâbish paper than by any other, for they do not follow Islamic practice in all things, and we are given our choice of three kinds of foreign influence, all of which are rejected in favour of the view that Kabâbish variation from orthodox practice is due to the survival of pre-Islamic customs; there seems to be good grounds for assuming that matrilocal marriage was formerly in vogue.

If a word of criticism may be permitted where so much of value is given us, it is on the subject of the total absence of aids to the use of the volume, after they have been read—papers to which repeated reference will be made by students have neither index nor table of contents. It is sincerely to be hoped that the lack will be remedied in future volumes.

N. W. T.

ANTHROPOLOGICAL NOTES.

Relics of British Elephants: Discovery at Oxford.—*The Times* of Jan. 2 17 reports the discovery of teeth and tusks of an elephant in the Deer Park of Magdalen College, Oxford. They were unearthed by labourers while digging for gravel at a depth of about four to six feet beneath the soil. Two tusks and four molar teeth were found, but one of the tusks was broken up by the workmen. The second tusk was successfully removed. The part preserved measures 3 feet 9 inches in length, nearly 19 inches in girth, and 6½ inches diameter. It has been identified as belonging to *Elephas antiquus*. A similar tusk, 7 feet 6 inches long, 24 inches in girth and 7½ inches in diameter, dug up at Chatham during the war, is now in the British Museum. *The Naturalist* for January also records the recent discovery of a mammoth tusk, measuring 5 ft. 4 ins. in length, in the Nene Valley near Islip (Thrapston). It was found in the lower part of the river gravel, 12-14 ft. below ground level.

The Decay of Custom in Ashanti.—Captain Rattray, writing in the Colonial Office Report on Ashanti for 1921, says that the Ashanti seem at the parting of the ways. One path, he believes, leads to the unrest and ferment we see on every hand among the peoples whose institutions we have broken down or as deliberately allowed to decay. Among the younger generation there is a tendency to ridicule the past; but it takes its cue from the white man. Captain Rattray is confident that if Political Officers and the Government were seen to take an interest in native institutions and encourage such customs as are good, the younger generation would follow suit and come to realise that they should not throw away their heritage. Along this path he sees a surer hope for the future.



FIG. 1.

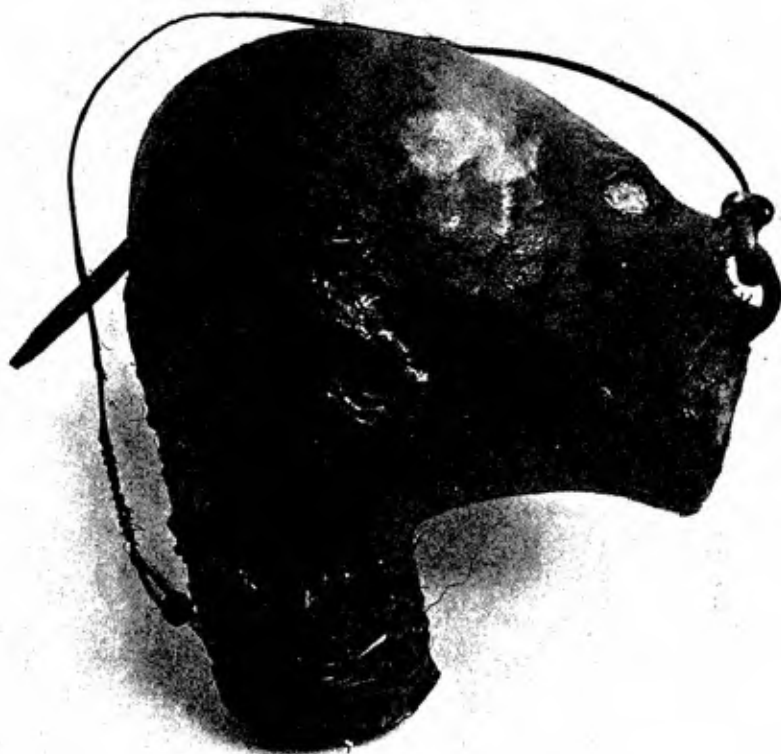


FIG. 2.



FIG. 3.



FIG. 4.



FIG. 6.

FIG. 5.
STUFFED HUMAN HEADS FROM NEW GUINEA.

ORIGINAL ARTICLES.

With Plates C-D.

Papua: Ethnography.

Riley.

Dorro Head-Hunters. *By E. Baxter Riley.*

18

During July, 1921, Mr. Logan, a Government Patrol Officer, brought into Daru a number of mummified heads which he had seized at Dorro, a village somewhere between the head of the Mai Kassa River and the Fly. The Resident Magistrate, Mr. A. H. Symons, gave me one for the Cambridge Museum, and one for the Manchester University Museum. I obtained leave from the R.M. to have one opened, and the Assistant R.M., Mr. Leo Austen, did this. Unfortunately I was not present, and was not satisfied with the notes sent to me (p. 35), so I was given permission to interview two of the prisoners who were captured in the district where the heads had been obtained. These men, named Goruosi and Pasere, accompanied by an interpreter from the native constabulary, a native of Tonda, who did not understand either English or Kiwai, but only a little Motu, went through the whole scene in my carpenter's shop, from the shooting and killing of the victim. Judging from the dexterity displayed by these men, both must have had considerable practical experience in surgery and mummification. The men refused a bamboo which was offered them for a knife, and used a reed, named in Kiwai "turu" and in the Dorro language "tong."

A mat was laid on the floor and Pasere lay down on it, pretending to be asleep; Goruosi then made the pretence of shooting the sleeper with a bow and arrow, and, having killed him, turned him on his back. With his reed knife in his hand Goruosi then stood 2 feet behind the corpse, and made the motion of cutting into the tissues of the neck. A circular incision was made at a point just over the right clavicle, quickly carried across the cervical vertebrae to the left side and across the throat to the right where the incision had first been made. The head was then twisted from left to right to break it at the joint at the axis. Pasere then arose and the two men together proceeded to show how the stuffing was done, by means of a mummified head which was given to them. Goruosi sat down with the head on his knees face downwards, Pasere helping to hold it in position. A vertical incision was then made in the median line on the back of the neck right across the occipital bone and 3 inches along the sagittal suture (i.e., the suture between the two parietal bones), going right down to the bone. The skin and tissues along the line were freed and two flaps made; these flaps were raised from the bones of the cranium and reflected upwards and outwards. This was done with a very thin piece of reed, and the skull was held by the assistant while the operator removed the whole scalp and the skin and all the muscles of the face, without removing the ears. When the whole mass of skin, tissue and muscles had been removed it was placed on a mat, and remained there until the skull was made ready for its being replaced. The skin, etc., did not appear to be either washed or scraped. The inferior maxillary was removed; it is sometimes put back again later, but more frequently not.

The brain was next removed by placing the skull in water, inserting a stick into the foramen magnum and working it round and round for some time until the whole brain substance had been washed away. Goruosi next took a piece of rattan cane, 12 inches long, $\frac{1}{2}$ inch broad, and $\frac{3}{8}$ inch thick; the ends of this were bent inwards to the depth of $\frac{3}{4}$ inch, forming two hooks. One end of this rattan was hooked on to the right zygoma and the other on to the left, forming a U-shaped loop; both ends were firmly lashed to the zygomas by thin rattan. The U-shaped rattan in the mummified skull takes the place of the lower jaw and acts as a support for the packing in the neck. Another piece of rattan, in this case double, was passed through the nasal cavity, carried across the occipital bone, along the sagittal

suture, over the frontal bone, past the nasal cavity, and formed into a loop 2½ inches below the teeth of the upper jaw. This was securely lashed in front of the nasal

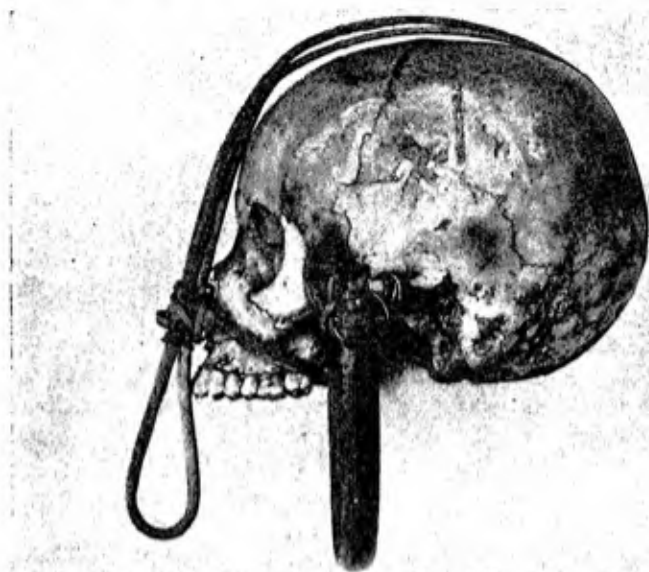


FIG. 1.

cavity (Fig. 1). A piece of rattan was put three times round the hard palate of the upper jaw and made fast just in front of the nasal cavity. This thick rattan forms the bridge of the nose, and the loop is used to represent the hole in the septum of the native's nose. When the skin is replaced, it appears as if the original nose remained.

The next operation consisted in boring a hole

through the cranium at the sagittal suture, 1 inch above the occipital bone. This was done by means of a 6-inch knife and a piece of wood used as a hammer. Goruosi gently tapped the handle of the knife with the wood, placing the point of the knife on the skull, and proceeded as if to drill his hole. He asserted that the holes are made with steel knives, and when asked where they were procured, he pointed in the direction of Netherlands New Guinea. The object of the hole is that a wooden peg, 4 or 5 inches long, may be inserted, so that the skull can be hung up over the fire and in the house. One end of a string is tied to this peg and the other end put through the hole in the septum of the nose. The nuts mentioned by Mr. Austen are placed inside the skull, through the foramen magnum, and can be heard rattling when the head is shaken.

The packing was next begun. The skull was first put into the skin, the temporal packings were put in first, then the packing between the skin and frontal bone, the skin being drawn over bit by bit and the fibre pressed home with a stick. The fibre used in the head opened by Mr. Austen was of two kinds: coconut fibre, and the teased bark of the ti tree. The coconut fibre was from the sweet coconut, of which the husk is chewed; after chewing, it is put out into the sun to dry before using. It is thus softer than ordinary coconut fibre and more easily worked.

When the packing of the regions of the parietal and occipital bones was completed, the vertical incision was carefully stitched with thin rattan sutures. The face was then packed by way of the mouth, also the large space where the lower jaw should be. The mouth was wide open and so remained when the stuffing was finished. A piece of clay was passed through the open mouth and pressed with a stick against the looped rattan and the inner skin under the chin; the whole cavity was then filled with fibre and another piece of clay put between the lips. A suture of rattan was put through both upper and lower lips, firmly twisted round with another piece and then tied.

The orbits of the eyes were filled with clay; black and red seeds of *Abrus precatorius* were put into the clay for ornamentation. The head is then dried on

a framework, consisting of two upright pieces of wood, forked, and 2 feet 6 inches in height; another piece of wood is laid horizontally, resting between the forks; the head is hung upon this and a fire lighted underneath. At the end of the second day it begins to smell, when the hair of the head is pulled out by hand. The men said it comes out quite easily on account of the decomposition of the skin. The head is taken into the house every night and taken out again in the daytime. The process continues "many days" until the curing is completed.

The mummified head is used in dancing the "Head Dance." The head is carried under the arm or in both hands; when carried thus it is shaken and the nuts within serve as a rattle. The lower jaw is used in this dance also. A piece of cane is tied round the neck of the ramus on both sides, and this cane is held in the hand. Pasere gave exhibitions of both dances. In the mummified heads, or in some of them, the ear ornaments of the victim are still intact.

I had difficulty in finding out why the lower jaw is not replaced. The explanation seemed to be that they prefer to hang this up in the house, and keep it as a mark or token of the owner's prowess in war, when the mummified head is discarded on account of natural decay; but the lower jaw is sometimes replaced. Goruosi showed how they fixed it in his village. He tied it to the zygomas, just as the rattan cane mentioned earlier.

E. BAXTER RILEY.

Papua: Ethnography.

Austen.

Karigara Customs. By Leo Austen.

19

[The Karigara country lies west of 142° E. long. to a distance of about 8 miles (where it abuts on the Muer country), and it extends from a few miles north of 8° 30' S. lat. to a line 10 miles south of that latitude in the west and 5 miles in the east; south of this oblique line is the Gubab (?) country. It contains the villages of Doro, Pakasideben, Gaganaru, Kerdanaku, and Waiadeben. Compiled from a sketch map by the author.]

Stuffed heads.—The head of an enemy is cut off from the body at the neck. It is then slit up the back as far as shown in the specimens obtained. When new it is more or less easy to cut through the flesh surrounding the skull, and the skull is taken out from the skin. The skin is then scraped of all flesh; the head is also cleaned, the inside being done with a stick while the head is immersed in water. The skull is then put back inside the skin and stuffed with coconut fibre and the teased bark of the ti tree (*Fasara*) [*Melaleuca leucadendron*?]; clay is used to stuff round the mouth opening. The lower jaw is not put back with the skull, but is used as an ornament for dances. A piece of rattan is used to represent the jawbone, and rattan is also tied round the head, back and front, presumably to keep the bones of the head together. Two or three nuts (of the *raro* tree) are placed inside the skull, and they can be heard rattling on shaking the head. This nut is used by the Morehead River tribes to rub on their bows to preserve them, and give them a dark-brown colour when placed in smoke for some time.

After the head is stuffed and sewn up, it is placed on a framework over a fire to be cured. The skin used as a cover for the skulls is called *yimbargani* ("head skin"), and not *pawaigani* ("wallaby skin"), as some people believe it to be.

Stuffed arms.—The arm is cut off the dead person midway between the elbow and shoulder, the bone being cut through or broken. The flesh up to the wrist and the bones are taken out, and the hand is left intact with nothing but the skin of the arm attached to it. After the skin has been properly cleaned of all flesh, it is stuffed with coconut fibre and ti tree bark, and the end sewn up with rattan. It is then dried over the fire like the stuffed heads.

The Karigara state that none of the flesh that is taken from either the head or the arm is eaten; it is always thrown away. The stuffed heads are not used in dances, but the stuffed arms are, the latter being held in the hand while dancing.

In cutting away the flesh from the heads and arms, the men take it in turns to help. It is not only the man who killed the enemy who does the work.

Burial.—The head of a friend or tribesman is not severed from the body and stuffed as is that of an enemy, but the body is laid out flat, face upwards and hands at the side. A hole about 3 feet 6 inches deep is dug and a piece of ti tree bark placed at the bottom; the man is laid on the bark, face upwards, with head to the setting sun. Ti tree bark is placed over him and the whole is covered over with earth, and a fence built round the grave to keep the pigs away. Some of the belongings of the dead person are placed on top of the grave; others are given to friends and relatives. Two days after the burial, yams and other foods are placed inside the enclosure, near the grave; some of the yams are cut in half. Coconuts are also planted in the enclosure. LEO AUSTEN.

Papua: Ethnography.

Haddon.

Stuffed Human Heads from New Guinea. *By A. C. Haddon, Sc.D.,* **20**
F.R.S.

I have before me representations of eight stuffed heads from the Fly River District:—1, 2; the heads in the Cambridge and Manchester Museums; 3, a photograph of one from the same locality; 4, photographs of Mr. Oldman's specimen; 5, 6, photograph and notes of two heads that were in the Museum at Port Moresby in 1914; 7, the D'Albertis head (New Guinea, II, p. 134), two photographs in Pinza's paper (pl. fig. 2), and a beautiful coloured drawing by Prof.

Giammiti of the same head (Figs. 2 and 3); 8, photographs of a head that I think is in the Australian Museum, Sydney.

They are all very much alike, and in the points wherein they differ I shall refer to them by their respective numbers.

The neck is longest in 5, 6, somewhat shorter in 7, and is entirely covered with skin; in 1, 2, 3,

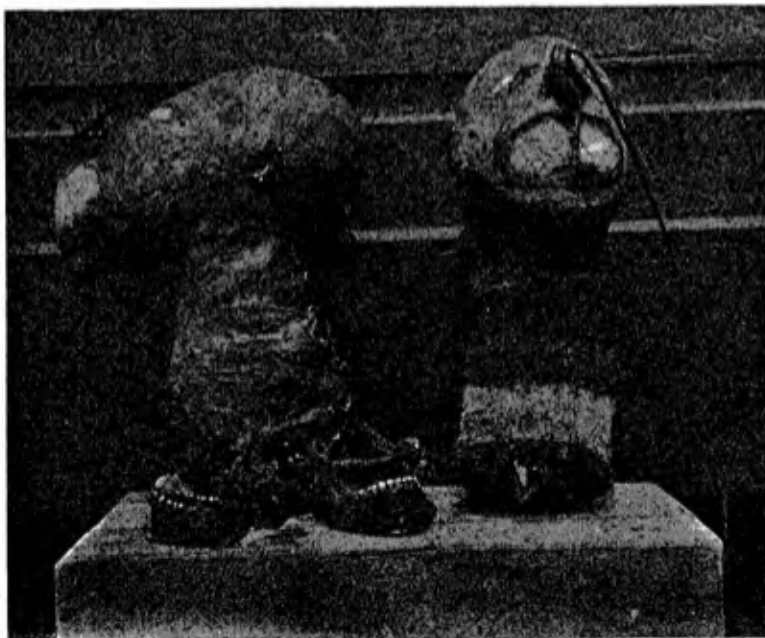


FIG. 2. HEADS 5, 6.

8, there is very little neck-skin; in 8 the portion of the neck which is made up with rattan lacing is very short and rounded, but it is longer in 1, 2, 3; 4 is intermediate. In every case the incision was made at the back of the neck and

head. The back of the head may be in about the same line as the back of the neck, as in 1, 3, but more usually it projects as in 2, 4, 5, 6, 7, 8. The face is very projecting and usually squared in front as in 1. When undamaged, the orbits are plastered with white clay; in 2 there is a horizontal band of split Coix seeds in each orbit, and in 4 there is a median vertical bar of cane in each orbit. The nose may retain its skin, as in 1, 2, 3, 7, 8, or be replaced by a loop of plaited rattan, 4, 5, 6; a cane nose-stick is inserted in 8 and a cylindrical, hollow (? bird's) bone in 7. In all there is a median lashing between the upper and lower lip, usually a strip of rattan served with split rattan, 1, 2, etc., or of plaited rattan, 8; the margin of the mouth is sometimes strengthened by rattan lashing or sown with fibre, 7, but not in 1, 2. Ear ornaments occur in 1, 2, 4. A wooden peg is inserted into the back of the head in 1, 3, 4, and a bone in 2. There is a rattan loop for suspension for 1, 2, 6, a plaited band in 4, 5, 8; one end of this is fastened to the nose-loop, or, in 8, to the ends of the nose-stick, the other end being originally attached to the peg at the back of the head, when there is one, as in 1, 2, 4, and apparently so in 8; in 5, 6, the head seems to have been suspended from the nose-loop only.

Two heads only are painted: 7 has a gradually broadening red band, which extends from the occiput and passes around the nostrils to the upper lip, and is continued as a narrow band round the lower lip; a broad band of yellow curves downwards and slightly forwards from the occiput to the front of each tragus; a broad white band extends from one zygoma to the other, passing round the chin; 4 has a very similar white band from above each zygoma, which thins away round the chin to an imperfect streak.

Heads 1, 2, 3 rattle when shaken; 4, 7, do not. I have no information about the others.

E. H. Giglioli (*Archivio per l'Antrop. e l'Etnol.*, XVIII, 1888), and in a paper on head-hunting in New Guinea (*l.c.*, XXVI, 1896, p. 311), refers to the head collected by D'Albertis, but gives no further information, and speaks of it as a trophy. G. Pinza, in an important paper on the preservation of human heads (*Mem. Soc. Geografica Italiana*, VII, 1897, p. 305) gives a side and front photograph of the same head, which he describes on p. 484; he regards these heads as memorials of deceased relatives, and gives other examples from New Guinea and elsewhere. The evidence given by the Rev. Baxter Riley and Mr. Leo Austen proves that these are really trophies, which fits in very well with the statement by Governor Murray of the readiness of the natives of Lake Murray to part with them.

The employment of human heads as rattles is not unknown in the Fly area. D'Albertis obtained near Canoe Island (142° 45' E. long.) several skulls with artificial faces and otherwise decorated, from under the chin of which extended a long rattan loop; these were used as rattles as they contained "small stones and



FIG. 3. HEAD 7.
THE D'ALBERTIS HEAD, FROM A PAINTING
BY PROF. GIANMITTI.

hard seeds" (the English translation gives "beads" instead of "seeds"!); one is figured by him (*l.c.*, II, p. 39, and Fig. 14, pl. p. 378), and also by Pinza (p. 438) who states that it contained "seeds and little stones." Pinza also gives a photograph (p. 443) of an undecorated skull with a rattan loop depending from the zygomatic arches, to which it is fastened precisely as in the skull given to the Cambridge Museum by Mr. Baxter Riley (Fig. 1); he says the skull contains stones, the loop in this case serving as a handle for the "rattle." He also describes an imitation rattle-head, decorated in the usual manner, but made out of a coconut (*l.c.*, p. 491, Fig. 34).

Mr. Austen states that the Karigara people also stuff arms of their enemies. The custom of wearing dried human hands and feet seems to extend right along the mountain zone behind the Gulf of Papua and to Torres Straits, but a discussion of this custom must be deferred to another occasion.

So far as I am aware, the first account we have of a stuffed human head is that by D'Albertis (New Guinea, 1881, II, p. 133, fig. p. 134), who obtained it at a village near the left bank of the Fly River, which appears to be a short distance south of 7° S. lat. [Sir William Macgregor subsequently identified this village as Odagositia: *Ann. Rep.* 1889-90, pp. 45, 86.] He describes it as "the embalmed head of a man with nothing remaining on it but the skin, from which the skull had been removed by means of a long cut at the back. The skin had afterwards been stuffed in such a way as to retain the natural appearance of a head. It has the defect of being too much stuffed. . . . The mouth is wide open, and, like the eyes, full of dried earth. Some streaks of colour complete this work of art." In reference to the remark made by Mr. Riley, it is interesting to note that D'Albertis states that he "saw none of the bamboo knives which are used at the mouth of the Fly and at Canoe Island to cut off heads" (p. 135).

Governor Murray, in referring to this (second) expedition of D'Albertis, says: "Something very like the head was found by Captain Everill's party on the Strickland below Hostile Point, and also by a Government officer, Mr. Massey-Baker, on his recent expedition (1911) up that river; Mr. Bauerlein, who accompanied Captain Everill, describes what was found by that party as being the skin of a man's head stretched over a model of clay" (Papua, or British New Guinea, 1912, p. 259).

On 1st April, 1914, Governor Murray visited a village up a creek on the east bank of the Fly, about 293 miles from the mouth. He says: "In the big house were several stuffed heads like those found on the Strickland River, and described by D'Albertis. He is, however, mistaken in saying that the skull had been removed by means of a long cut at the back. It is, I believe, true that a long cut is made at the back, and that the skin is drawn forward over the face and the flesh removed, and replaced with clay, fibre, etc.; but the skull is not removed—it is inside all the time, as I saw in the case of an old dilapidated head which I found on Lake Murray" (*Papua, Ann. Rep.*, 1913-14 (1914), p. 23; cf. S. H. Ray, *MAN*, 1918, p. 42). At a village about 12 or 15 miles from the entrance, on the right-hand side going up the lake Murray, "the principal articles of barter which they produced were skulls, jawbones, and stuffed heads" (Murray, *l.c.*, p. 24).

As I stated in my Huxley Memorial Lecture (*J.R.A.I.*, L, 1920, p. 242), stuffed human heads are one of the characteristics of the culture of the middle region of the Fly and the Strickland and the country lying between them, including Lake Murray; it extends from about 7° S. lat. to Everill Junction, *i.e.*, where the Strickland joins the Fly at 7° 30' S. lat. We now learn that similar heads occur one degree further south, and west of the Fly River. It seems probable that the latter locality may be a sort of backwater of a stream of migration down the

Strickland, and we may expect to find that the Karigara drink kava (cf. MAN, 1916, No. 87, and *The Geographical Teacher*, 1921), but the making of these stuffed heads does not seem to be necessarily an integral part of the kava complex, though it does appear to link on with the custom of making artificial faces to skulls, which obtains from the Sepik to the Purari-Fly districts and to Torres Straits.

A. C. HADDON.

Description of Plates C-D.

Pl. C, Fig. 1. Side view of a stuffed head (1) from Karigara district, in the Museum of Archaeology and of Ethnology, Cambridge, presented by the Rev. E. Baxter Riley.

In the upper margin of the right ear is a hole, from which depends a thin string on which Coix seeds were probably threaded; in the perforated lobe is a coiled terminal portion of a dried hairless tail, probably of a cuscus. The upper hole of the left ear has a string on which are threaded halved Coix seeds, the lobe is perforated. At the back of the head a strong wooden peg projects, slanting downwards. One end of a loop of split rattan is tied to the nasal septum, the other end is split and lashed to form a loop to pass over the projecting peg. The head is of a dark reddish-brown colour, lighter where it is rubbed. Length of head, 305 mm.; breadth, 185 mm.; height, 310 mm.; probably male.

Pl. D, Fig. 6. Back view of the same head.

Pl. C, Fig. 2. Side view of a stuffed head (2) from Karigara district, in the Manchester Museum, presented by the Rev. E. Baxter Riley.

The left ear has a long string of cut Coix seeds hanging from a hole in the upper margin; the lobes of both ears were probably perforated. The right orbit has across it a line of three split Coix seeds, there are two in the left orbit. A bone (probably the fibula of a cassowary) is inserted into the hole at the back of the skull, and its sharply-pointed end projects in front. A long piece of split rattan is tied to the bone behind, and the other end was doubtless tied to the nasal septum. Colour as above.

Length of head, 235 mm.; breadth, 143 mm.; height, 291 mm.; probably female.

Pl. C, Fig. 3. Back view of the same head.

Pl. D, Fig. 4. Side view of a stuffed head (4) in the possession of Mr. W. O. Oldman, of which he has kindly sent me photographs and given me particulars. It was collected by Mr. S. G. MacDonnell, late of Orokelo, from the Rivikavan district (which I have not been able to locate).

In the distended lobe of the right ear is a long fibrous tassel (? of finely shredded sago-palm leaf) of a red colour. In each orbit and in the mouth is a vertical bar of cane-work, which probably were once covered by the white clay. The nose loop is of plaited rattan. A small piece of wood is inserted into the back of the head. A long narrow plaited band is tied to the nose loop (it is wound round it in this photograph); the other end was doubtless tied to the peg at the back of the head. The head shows signs of great age and much handling; the skin is polished a deep brown, and the rattan work is dark-coloured and polished. The surface of the skin is coloured red, yellow and white.

Length from nose to back of head, $13\frac{1}{2}$ inches (343 mm.); height, $11\frac{1}{2}$ inches (292 mm.).

Pl. D, Fig. 5. Front view of a stuffed head (8), ? in the Australian Museum, Sydney, where there are, I am told, two specimens.

Figures in text.

Fig. 1.—Skull of a young adult female showing the method of preparing a skull previous to stretching the skin over it. Length, 165 mm.; breadth, 124 mm.; height, 129 mm.; C.I.75.2, L-H.I.78.2, B-H.I.104. Museum of Archaeology and of Ethnology, Cambridge; presented by the Rev. E. Baxter Riley.

Fig. 2.—Stuffed heads (5, 6) from Lake Murray, in the Museum at Port Moresby in 1914. In 5 there is a cut on the right cheek which has been roughly sewn up. Photographed by Miss Kathleen Haddon (Mrs. Rishbeth).

Fig. 3.—Front view of stuffed head (7) collected by D'Albertis, now in the Museo preistorico ed etnografico, Rome. From a coloured drawing by Professor Giammiti, for which and for valuable information I am greatly indebted to Dr. Ugo Antonelli of that Museum.

Balkan Peninsula: Place-names.

Durham.

Dardania and some Balkan Place-names. By M. Edith Durham.

In South Slavonic and Albanian districts a very large number of place-names derive from the names of plants. Folk settled on fertile spots and named them from the crop that flourished. In all Serb-speaking districts with which I am acquainted such names as Grahovo (the place of beans), Orahova (of walnuts),

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Jagodina (of wild strawberries), Treshnja or Treshnjevo (of cherries), Jabuka (of apples), Krushevo or Krushevatz (of pears), Vrbitzza (of willows), Bukovina (of beeches), and many others are common.

Similarly in Albania we find Arnje (larch trees), Kashtenja (chestnuts), Mela (apple), Arra (walnut), Chereti (oaks), Kumula (plum), Dardhe (pear), and others, all occurring in various forms as place-names.

All the above-mentioned trees and plants are recognised as indigenous to south-eastern Europe so far as I can learn, and so have, in all probability, gone on calmly growing in the same spots, whether ruled by Alexander the Great, Justinian, Abdul Hamid, or Petar Karageorgevitch. We may, therefore, expect to find some of these place-names to be very ancient.

When we first hear of the Balkans it was inhabited by numerous tribes under independent chieftains, but, so far as our scanty information goes, most of them spoke a similar language and had similar customs. One important tribe was the Dardanian.

Of the Dardanians we learn from various classical authors that they were a powerful Illyrian tribe, occupying a valuable strategic position. Their territories lay on the watershed of the Morava and Vardar and along by the Drin. They thus commanded the routes to the Danube, the Adriatic and the Ægean. They harried the Macedonians. Livy gives a fairly detailed account of their warfare with Philip, last King of that name of Macedon (died B.C. 179). It was he who by provoking war with Rome brought about the destruction of Macedonia (Livy, lib. XXXI, c. 5). Philip having made ready an army with which to fight the Romans "undertook a sudden expedition into the territories of Oricum and Appolonia (South Albania), in order that Macedonia might not be molested by the Illyrians and cities bordering upon them, in consequence of the terror he would strike into them. After devastating the adjacent parts of Illyricum he . . . then took Sintia, a city of the Dardanians, which would have afforded them a passage into Macedonia."

The natural result of this was that while Philip was occupied fighting the Romans "he was met by messengers with intelligence of still greater commotions, that the Dardanians having passed into Macedonia were in possession of Orestis and had descended into the Argestean plain." A report of Philip's death encouraged the Dardanians to this attack. The Dardanians then (lib. XXXI, 28), seeing that Roman arms were victorious, came, along with "several petty kings and princes, neighbours of the Macedonians, and offered their aid to the Romans against Macedonia." The "consul replied that he would make use of the assistance . . . of the Dardanians when he should next lead his army into Macedonia." In lib. XL, c. 57 we find Philip furious, planning to annihilate the Dardanians and to "settle Bastarnians in their land, from which a double advantage would accrue." The ever hostile Dardanians would be out of the way, and the Bastarnians could be used to ravage Italy. Even were the Bastarnians cut off by the Romans it would be worth while for "the booty to be gained and the full possession of Dardania would prove a consolation." But a miraculous tempest scattered the Bastarnians, and Philip died. I find no more of the Dardanians in Livy. But it is evident they were a rich and powerful people. True to Balkan type they sided with a foreign invader against their Balkan neighbours—and lived to repent. By the time of Strabo (ob. A.D. 25) we find them completely crushed and under Roman rule. He describes how the Romans drove recalcitrant tribes into the mountains "not fitted for husbandry." "People formerly very powerful are extinct or reduced to the lowest condition; as the Boii and Scordisci among the Galatæ and the Antariatæ, Ardei and Dardani among the Illyrians. . . . They first declined owing to disputes among themselves" (the usual ruin of tribal peoples) "and were finally prostrated by wars with Macedonia and the Romans."

He describes exactly the situation of the Dardanians. "The river Drilon (the Drin) can be navigated up as far as Dardanica. This country is situated close to the Macedonian and Paenonian nations. . . . To the Dardaniatæ belong the Galabrii . . . and the Thunatæ, who approach the east close to the Mæsi, a Thracian tribe. . . . The Dardani are an entirely savage people, so much so that they dig caves beneath dung heaps, in which they dwell. Yet they are fond of music, and much occupied in playing on pipes and stringed instruments. They inhabit inland parts of the country, and we shall again mention them in another place." (Strabo, lib. VII. *et seq.*) But, alas, the rest is lost.

The Dardanians by Strabo's time were in a deplorable state. They remind me forcibly of the burnt out Bulgars of Macedonia in 1904. I repeatedly found a party of shivering women sitting with their legs buried to the thighs in a dung-heap with the hope of thus getting a little warmth. They were half naked, roofless and exposed to a bitter wind. Others crowded into a cowshed, where such could be found. The Dardanians after being beaten by the Romans were, doubtless, in similar plight. And, like the present Balkan peasants, when in acute misery would crowd round a man who sang of their heroic past. *Plus ça change plus c'est la même chose!* The Dardanians cannot have possessed a more primitive stringed instrument than the gusle, which is still played in their former lands.

The maps of Ptolemy (about 140 A.D.) next give the position of Dardania. The accompanying sketch (Fig. 1) from Magini's edition of Ptolemy, 1621, in spite of much distortion, gives a fairly clear idea and shows that it extended north of Nish. Later, in the time of Diocletian (A.D. 313), we find Dardania a Roman province with Naissus as capital. Diocletian was of Illyrian blood, a fact which may have caused him to preserve the Illyrian name.

The name has died out very recently. Dardania occurs as a small triangle in a map I possess of 1610, "by John Speed, sold by Roger Rea at Cornhill." It includes Nish and Uskub. And "Dardaniæ deserta" is written across a tract of land lying well in the centre of the peninsula in a map published at Norimberga 1770."

Have the Dardanians left a mark on the land to-day?

If, as I would suggest, we may derive Dardania from an Illyrian word meaning "pear," a word similar to the modern Albanian "dardhe," they certainly have. There are three Dardhes in high Albania close to the Drin, which in Strabo's day was navigable as far as Dardania. And this part of the land being very mountainous has, I believe, been continuously inhabited by people of Albanian (more or less Illyrian) blood and has been continuously Albanophone.

Beyond the Drin the plain lands fell completely under Serb rule for a long period and has now again reverted to Serbia. Here also we find many pear names, but they are Serbised as Krushevo and Krushevatz. The accompanying sketch map (Fig. 2) gives the chief ones which fall within old Dardania. One,



FIG. 1.—PTOLEMY'S MAP SHOWING DARDANIA.

which was called *Krusha e vogele*, when I passed it in 1908, was a transition form, "krusha" being Serb and "e vogele" Albanian—the little pear. By now it has doubtless become "*Krusha mala*"—Serb again.



FIG. 2. SKETCH MAP SHOWING MODERN PEAR-NAMES.

name they Italianised and adopted. I have not been able to identify the *Krushevo* in question.

Description of Figs. 3 and 4: Fig. 3, *Krushka mala*—the little pear—is worked as a border of the Montenegrin women's shirts on a coarse cotton material in cross stitch

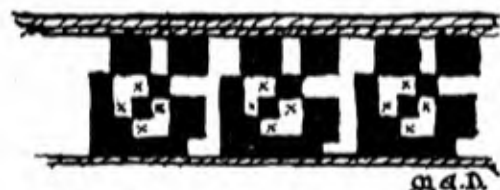


FIG. 3. PEAR PATTERN, MONTENEGRO.



FIG. 4. PEAR PATTERN, BOSNIA.

in silk—red, green, black, blue, repeat. Twice natural size. Fig. 4, Pear pattern worked in cross stitch in indigo wool on the sleeves of women's shirt, the pattern repeats closely and covers the material, which is coarse cotton. Bought at Jaitza, Bosnia (1906). Slightly larger than natural size. M. EDITH DURHAM.

Assam: Technology.

Hutton.

Angami Naga Dye Processes. By J. H. Hutton.

In "*The Angami Nagas*" (p. 62) and in "*The Sema Nagas*" (p. 51) I have given a very cursory account of Naga methods of dyeing. In the subjoined tables will be found what is, I think, a complete summary of the different dye stuffs used by the Angamis, and of the methods of employing them. Owing to the importation of dyed yarn from Manipur, and of aniline dyes from the plains, these Naga processes are beginning to disappear, and the use of *nthoh* (A. 2) is already obsolete.

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I have divided the processes into two parts, according to whether they consist of single treatments, or whether the material to be dyed has to be treated twice with different dye stuffs.

I am indebted to Mr. A. C. Tunstall, of Toklai, for identifying the plants, of which I sent him specimens, and for detecting the chemical action of the black mud dye on the cloth previously steeped in water with which the bark of *Macaranga denticulata* was boiled.

Specimens of the dyed material will probably be shown (by the Indian Forests department) in the British Overseas Trade Exhibition in 1923.

A. SINGLE PROCESS DYES.

The material to be dyed is boiled with the dye stuff and the mordant, if any, in a cauldron.

Dye.		Mordant.		Material dyed.	Resultant Colour.
Angami Name.	Scientific Name.	Angami Name.	Scientific Name.		
1. <i>Tsoprü</i> - -	<i>Strobilanthes flaccidifolius</i> .	<i>Nil</i>	<i>Nil</i>	Cotton yarn or cloth.	Black or dark blue.
2. <i>Nthoh</i> - - -	<i>Mahonia pyenophylla</i> (Fedde) [or <i>Berberis nepalensis</i> (Spreng)].	<i>Nil</i>	<i>Nil</i>	Cotton yarn	Yellow.
3. <i>Megwü-fü</i> (or <i>megwü kezhaö</i>).	<i>Symplocos grandiflora</i> (Wall.)	<i>Nil</i>	<i>Nil</i>	Cotton yarn	Yellow.
4. <i>Megwü-nu</i> (or <i>megwü kemeseo</i>)	<i>Symplocos (?) spicata</i> (Roxb.)	<i>Nil</i>	<i>Nil</i>	Cotton yarn	Yellow (but not lasting).
5. <i>Megwü-nu</i> (or <i>megwü kemeseo</i> .)	<i>Symplocos (?) spicata</i> (Roxb.)	<i>kwethoh</i>	<i>Morinda angustifolia</i> (Roxb.)	Cotton yarn	Salmon pink.
6. <i>Tsenhü</i> (<i>tsenhü kethä</i> .)	<i>Rubia cordifolia</i> (Linn.)	<i>kwethoh</i>	<i>Morinda angustifolia</i> (Roxb.)	Cotton yarn	Red.
7. <i>Chēmü</i> - -	<i>Cordia mixa</i> (L.) (bark or leaf).	<i>Nil</i>	<i>Nil</i>	Cotton yarn	Drab (the leaf gives a slightly darker shade than the bark).

B. DOUBLE PROCESS DYES.

In 1 and 2, the material is first dyed yellow, and then the desired shade of red, the mordant being used with the second dye, the method in both cases being the same as in A.

First Dye.		Mordant.		Second Dye.		Material Dyed.	Colour.
Angami Name.	Scientific Name.	Angami Name.	Scientific Name.	Angami Name.	Scientific Name.		
1. <i>Megwü-nu</i>	<i>Symplocos (?) spicata</i> (Roxb.)	<i>nki</i>	<i>Macaranga denticulata</i> (Muell Erg.) (leaf used).	<i>tsenhü</i> (<i>tsenhü kethä</i>).	<i>Rubia cordifolia</i> - (Linn.)	Cane	Scarlet.
2. <i>Megwü-fü</i>	<i>Symplocos grandiflora</i> (Wall.)	<i>tsomhu</i>	<i>Rhus semicicuta</i> (Murray). N.B.—The berry of this plant is used, not, as usual with such plants, the bark (or leaf).	<i>tsenhü-nküpa</i>	<i>Rubia sikimensis</i> (Kurey).	Goat's hair and cotton yarn.	Scarlet. Scarlet or orange.
3. <i>Nki</i> -	<i>Macaranga denticulata</i> (Muell Erg.)	<i>nki</i>	<i>Macaranga denticulata</i> .	<i>nyeba</i>	<i>Nyeba</i> is a black mud, containing iron salts, which act upon the gallic acid in the bark of <i>nki</i> .	Cane, cotton yarn, cloth.	Black.

N.B.—In this last process the article to be dyed is boiled with *Nki* bark, which is really not a dye, but a tan or a mordant, and contains gallic acid. It is then dried off and then steeped, for at least two hours, in black mud mixed with the remnants of the water in which it, and the *Nki*, were previously boiled. The iron salts in the mud act upon the gallic acid of the *nki* and turn the saturated material black.

J. H. HUTTON.

REVIEWS.

Europe: Archæology.

Brooks.

The Evolution of Climate. By C. E. P. Brooks. With a preface by G. C. Simpson. London: Benn Brothers, Ltd. 1922. Pp. 173. Price **23** 8s. 6d. net.

Many writers, geologists and geographers, palæontologists and anatomists, astronomers and archæologists, have studied the Ice Age and propounded theories thereon; here we have a meteorologist entering the field and throwing new light on this much discussed problem by contributing a fresh array of facts and interpretations. Mr. Brooks will hear of no astronomical causes and makes short work of Croll and his kindred; for him these fluctuating phases are due solely to variations in the elevation of the land and the change of currents of air and water caused thereby. It is an interesting hypothesis, well supported on many points by ascertained data and acute reasoning, and should greatly assist towards that much longed-for yet far-off goal, an agreed solution of all Ice Age problems.

Though the subject of the weather is of perennial interest to the inhabitants of this island with its changeful climate, most of our readers are more concerned with the human aspects of the problem than with meteorology. The anthropologist will find in this volume much valuable material concerning man's environment at different epochs, much food for thought and no little with which he is likely to disagree. Considering the varied views which are held by archæologists on the relations of human cultures to the different glacial phases this is not surprising and could scarcely be avoided, though on certain points Mr. Brooks will find himself at variance with all the French *savants* and a goodly number in this and other countries.

As in his former works, Mr. Brooks adheres to the views advanced by Penck in 1910, that the Chelles and St. Acheul cultures belong to the Mindel-Riss interglacial phase, while the Mousterian should be placed in the Riss-Würm. It is true that he says that this was *probably* the case, but he writes throughout as though he were unfamiliar with the fact that the alternative view, namely, that the Riss-Würm saw the Chelles and the St. Acheul industries, while that of Le Moustier "straddled the Würm," is more commonly held, whether rightly or wrongly, throughout France and most other lands. In a footnote to page 51 he says: "This has been the subject of much discussion recently," as though he had only lately become acquainted with this view; yet it was advanced by Boule as early as 1888, and repeated in fuller terms by Obermaier in 1909 and 1912, by R. R. Schmidt in 1912 and Schuchardt in 1913; it became familiarised to English readers by Fairfield Osborn in 1915.

This view may, in Mr. Brooks's eyes, be wrong, but in any case it merits attention, yet, except for the footnote in question, no hint is given that it has been advanced. No arguments are produced against it, but in the same footnote the reader is referred for further information to *Science Progress*, 17, 1922, October, p. 233. Should the reader refer to this Journal he would, I fear, find little to enlighten him upon this point, not a shred of evidence or the vestige of an argument, only the dogmatic statement that the rival view is correct.

It seems a pity that Mr. Brooks has consistently ignored a view which has received universal support in France and which is advocated by such an array of leading authorities in Germany, Austria and America, not to speak of most of the leading British archæologists. The sole evidence he cites in favour of the rival view is the statement that: "In the pre-Rissian loess an implement of Acheulian age was discovered in 1910 at Achenheim (Alsace) by R. R. Schmidt." It is true that the implement in question is of St. Acheul type, but the age of the lower loess in which it was found is not admitted by all to be pre-Riss. In 1911 the age of this loess was much disputed, as Sollas then told us; the following year the finder ranged himself, as we have seen, with the school of Boule and Obermaier; in 1915,

on palæontological evidence, Fairfield Osborn advanced the same view. Thus it appears that many weighty names are against the pre-Riss age of the lower loess at Achenheim, and the results of the recent investigations of Dubois and Stehlin at the Cotencher cave in Switzerland are claimed by those authors to be decisive against Penck's tentative attribution of the Chelles industry to the Mindel-Riss phase.

Though there are other points upon which many archæologists will differ from Mr. Brooks, this is the most outstanding and many of the others follow from it. Coming to later times we note that Mr. Brooks accepts Pumpelly's date for the first village of Anau, though this was contradicted by Dr. Schmidt, who acted as archæologist to the expedition. He accepts, too, de Morgan's date for the beginning of the culture at Susa, though this has not found favour among the latter writer's compatriots, and Sir Arthur Evans's first estimate of the age of the Neolithic deposits at Cnossos, which that distinguished archæologist is not now prepared to adhere to.

These criticisms have now been elaborated at some length, as it appears desirable not to allow such an *ex parte* statement to go forth without protest. Nevertheless it must not be supposed that the work is valueless or vitiated by the statements mentioned. On the contrary, the views criticised do not in any way affect the argument of the book, or in other respects impair its value. Whether the main thesis is correct is for the geographer and the meteorologist to decide, but in any case the book is stimulating and suggestive, and a valuable contribution towards the solution of a difficult problem. No anthropologist can afford to neglect it.

The work is lucidly written and well printed; a few maps would have been a help to the student, while the documentation leaves much to be desired, and the index is not as full as it might be. Still, in spite of these criticisms, we must congratulate Mr. Brooks in having produced a volume which is a real contribution to knowledge.

H. J. E. P.

Nationality.

Van Gennep.

Traité comparatif des Nationalités. By A. van Gennep. Paris: Payot. 1922. 228 pp. 23 × 14 cm. 8 francs.

24

Vol. 1 of this work has just appeared and deals with external elements of nationality. It opens with a discussion of the definition of nationality and takes a position not unlike that of our English writer Sidney Herbert in dissociating nationality from considerations of State. Van Gennep finds no definition finally satisfactory in view of the complexity and graded applications of the term. As the author looks at European problems to some extent from the point of view of general anthropology, nationality is to him merely a special form of old and widespread group-consciousness. As, however, the idea of consent of the governed, i.e., of self-determination in a sense, was invoked in the fifteenth century, the ideal of nationality is obviously in large part older than is often allowed. The author disposes quickly of minor and unstable differentiating marks, like costume, houses, festivals, and in this connection pleads for a survey of village plans and of house types, considering not so much the building materials as the house-plans. He criticises rather severely the work of Brunhes and of Cvijic in this field, allowing the latter no scientific value. Alphabets are another differentiating mark and here the author has allowed mistakes to glide into his text (p. 63), for the Serbs use the Cyrillic script and the Croats and Slovenes the Latin, while there is no appreciable peculiarity in Welsh script, whereas the book states the contrary in each case.

Language is a much deeper basis of separation, but Van Gennep seems to suggest that it is only with the nineteenth century and its cheap publications and widespread book-learning that languages have become fixed and that States have taken an

interest in securing language uniformity. It is to the end of the eighteenth century that he ascribes the beginning of anti-Celtic efforts on the part of England. On these points many would dissent. Language changes on a large scale have not occurred, save in the nondescript upper classes of society, since market towns became important facts of rural life, and any one in the Celtic fringe of Britain will tell of efforts, in Tudor times at least, which, whatever their mixed motives, must have tended to repress the Celtic languages. A most valuable section of the book, in the chapter on language, criticises current linguistic censuses and maps, showing how politics vitiate them in nearly every case. The link of man and soil is allowed by the author to be a vital factor of nationality and, as against so many authors who make an exception of the Jews, he urges that these are the supreme example with their attachment to Jerusalem.

The discussion on frontiers is of more geographical than anthropological importance, but is carefully done. Incidentally one may note some important books to which Van Gennep refers continually and which should be better known in Britain:—

A. Meillet. "Les Langues dans l'Europe nouvelle." 7 fr. 50 c. Paris, 1918.

Auerbach. "Races et Nationalités d'Autriche-Hongrie." Paris, 1917.

H. J. FLEURE.

Malaya: Ethnography.

White.

The Sea Gypsies of Malaya: an account of the nomadic Mawken people of the Mergui Archipelago, with a description of their ways of living, customs, habits, boats, occupations, etc., etc., etc. By Walter Grainge White, F.R.G.S., Member of the Oxford University Anthropological Society. With a Foreword by R. R. Marett, M.A., D.Sc., F.R.A.I., University Reader in Social Anthropology, Oxford. London: Seeley, Service and Co., Ltd., 1922. 22 x 14 cm., pp. 318. 20 illustrations and one map. Price, 21s. nett.

Although the first five words above written constitute a big misnomer, the more limited scope of this interesting and sympathetically written book is well indicated by the rest of its somewhat lengthy title. Like the title, the body of the work, good as it is, could have been much improved by compression. It abounds in repetitions, and, though it is concerned mainly with cultural anthropology, there is rather too much intrusion of the author's own philosophy and speculations on all manner of subjects, many of them hardly relevant.

Mr. White is about the only European who has learnt the Mawken language, but he is otherwise hardly equipped for dealing with it scientifically. When he says (p. 160) that, "if it can be shown that Mawken and Malay have affinities, it will also be demonstrated that these are due to modern adoptions," he overlooks the patent fact that Mawken (*alias* Selung) retains many archaic Malayo-Polynesian words and forms which Malay lost untold centuries ago (if it ever possessed them). When he asks (p. 159), whence came the non-Malayan words in Mawken (adding, rather hastily, "that question will remain unanswered"), he lays himself open to the obvious reply that some of them at any rate (like the Mawken name for "boat," which is pure Talaing) came from their near neighbours on the mainland of Burma.

Nevertheless, the book is to be commended as the best and fullest account of the general life and habits of the people with which it is mainly concerned. The illustrations are excellent and the map is on a useful scale. C. O. BLAGDEN.

Pacific: Ethnography.

St. Johnston.

The Islanders of the Pacific, or The Children of the Sun. By Lieut.-Colonel T. R. St. Johnston. London: T. Fisher Unwin, Ltd., 1921. 23 × 14 cm., pp. 303, with pls. and map. Price 25s. nett. **26**

Colonel St. Johnston says modestly in his introduction that this book does not pretend to be more than a popular treatise; but when he goes on to say that it is a book "dealing for the first time, I believe, with the Pacific as a whole" (it is only a work of about 300 pages), you turn to its chapters with a feeling of misgiving. There is much in these chapters that is interesting and instructive to the general public; but Colonel St. Johnston explains and interprets with some appearance of confidence a number of ethnological questions that are not quite so simple as he appears to imagine, and this sort of thing is apt to mislead readers, and so do harm. The sub-title of the book, and the prominence given in its pages to sun worship, might lead a reader to believe that this was the dominant cult of the Pacific; though in the concluding chapter the author admits that it was only a past cult, the traces of which survive.

R. W. W.

Linguistics.

Vendryes.

Le Langage: Introduction linguistique à l'Histoire. By J. Vendryes. Paris, 1921. xxviii + 439 pp. **27**

This is a philosophical discussion of the place of linguistics in the history of human development. It deals in detail with problems of the origin and development of language, its expression in sounds, words and grammar, and the changes brought about by internal operations and the interaction of one language upon another. Methods of classification and comparison and the written character are also discussed. The author has written accurately and thoroughly and his work is well worthy of attention as an exposition of linguistic results from the philosophic standpoint.

S. H. R.

Borneo: Ethnography.

Rutter.

British North Borneo: an Account of its History, Resources and Native Tribes. By Owen Rutter, F.R.G.S., F.R.A.I. With an Introduction by Sir West Ridgeway, G.C.B., G.C.M.G., K.C.S.I. London: Constable & Co., Ltd., 1922. 22 × 14 cm., pp. xvi + 404, 42 illustrations and two maps. Price, 21s. nett. **28**

It is curious that another book on British North Borneo should have appeared so soon after the one recently noticed in these columns. The present one has a somewhat more extended scope, covering the whole territory and giving its history in some detail. It is an excellent work, which will take rank as a standard authority on the country it so fully describes, and it can be safely recommended to anyone who desires to become acquainted with the subject. There is no space here to do justice to its almost encyclopædic contents. The book is well arranged and eminently readable. I note for special mention a useful classificatory description of the native tribes. The illustrations are admirable, and a bibliography of works on Borneo, and several appendices (including a too brief comparative vocabulary of dialects), add considerably to the value of the work.

I trust it is not hypercritical to regret the somewhat unconventional spelling of a good many of the Malay words introduced, though that is a very minor detail, and perhaps some of the divergencies may be due to local peculiarities of pronunciation.

C. O. BLAGDEN.

CORRESPONDENCE.

The Foxhall Flints.

Warren.

To the Editor of MAN.

SIR,—With reference to the note in the October number of MAN (1922, 90), it is quite true that the bulk of material that I have, from which I can select my best pieces, is a negligible fraction of the bulk possessed by my opponents, from which they can select their best pieces. This places my side at a disadvantage; I cannot show an exact duplicate to every specimen from the Crag, but only to some of them.

Nevertheless, if Mr. Burkitt, who is taking such a strong line in the matter in this country, will (in collaboration with any other authorities, if he thinks fit) make drawings of the mechanical and the disputed Crag flakings side by side, and demonstrate the significant differences between them that he sees, I will undertake the corresponding demonstration of the significant similarities that I see, and the equal absence from both of the distinctive characters which are produced by muscular elasticity in the delivery of a blow.

I would suggest that each side should have full opportunity of studying all the points raised by the other, before the report as a whole is finished. I should be willing to draw up a rough draft of my points first, and send this to Mr. Burkitt, who would draw up his report, and send them back to me; but I do not mind which side makes the first start.

My friend, Mr. Burkitt, and I would have no difficulty in carrying on without acrimony, but I would suggest that it should be mutually agreed that all personal discussion (such as "Mr. Burkitt says this" and "Mr. Warren says that") be disallowed. I think the impersonal presentation of the evidences from the opposing points of view is the more likely to help the progress of the enquiry.

I do not believe in "tests," but I think that such a scheme as this would clear the air, and narrow down the problems to essential points of difference, and thus pave the way to ultimate solution, one way or the other.

I am, Sir,

Yours faithfully,

S. HAZZLEDINE WARREN.

February 5, 1923.

ANTHROPOLOGICAL NOTE.

Prehistoric Society of East Anglia. The London meeting of this Society will be held at the rooms of the Society of Antiquaries, Burlington House, on Friday, March 9th, at 2.15 p.m. A cordial invitation is extended to all Fellows of the Royal Anthropological Institute. The programme is as follows:—

KENDAL, REV. H. G. O.—A Flenusian Industry in North Wilts;

FOX, DR. CYRIL—Archæological Problems in the Cambridge Region;

BUCKLEY, FRANCIS—Phases of the Pigmy Industry of the Pennine Chain;

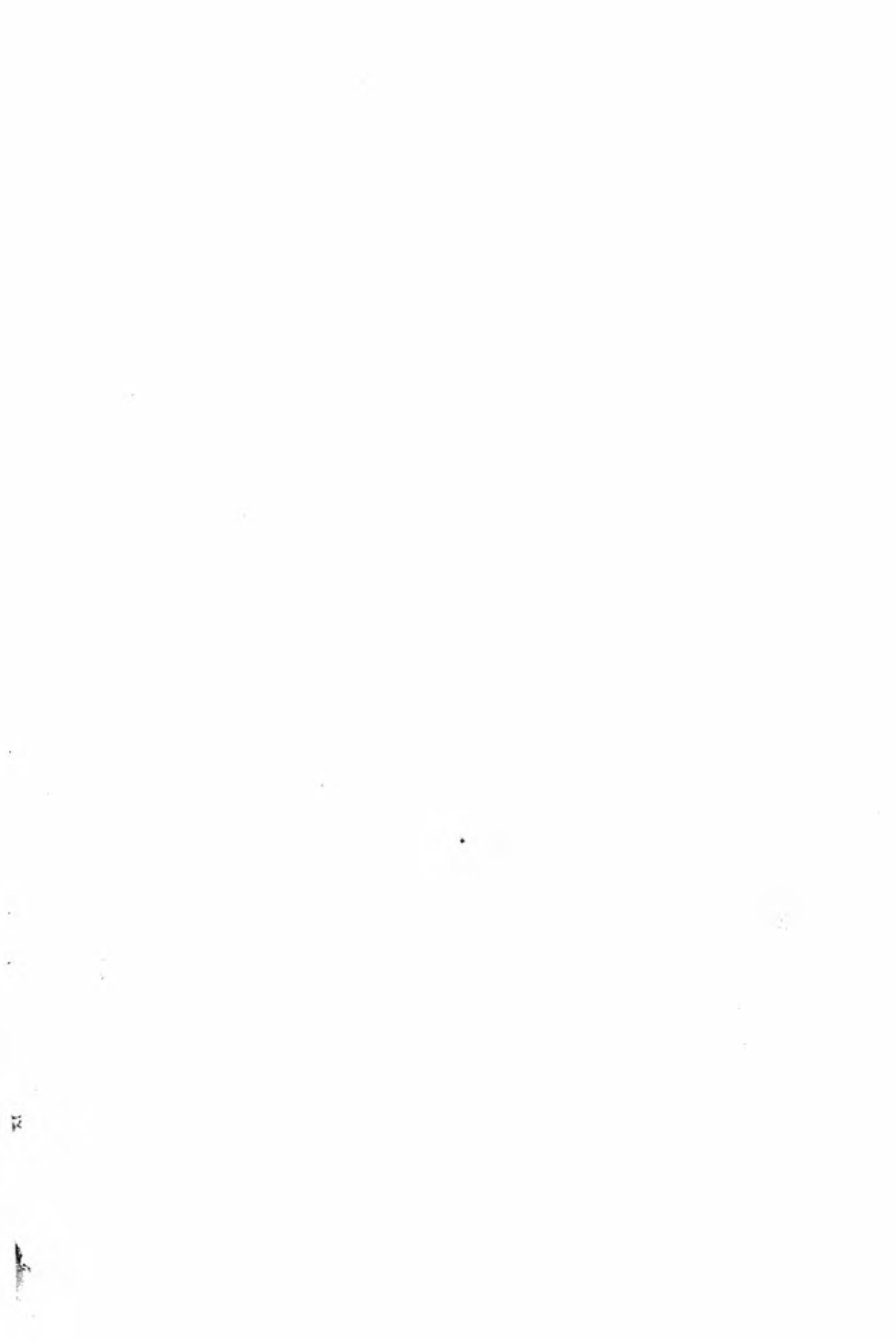
CRAWSHAY, DE BARRI—Notes on Eoliths and Excavations on the Chalk Plateau;

ARMSTRONG, A. L.—Recent Finds at Grime's Graves;

FOX, G. J. B.—Some Implements showing palæolithic Facies from Cissbury Camp;

and at 5.15 p.m.—

MURRAY, MISS, M.A.—Recent Excavations in Malta.





1



2



3



1A



2A



3A



4



4A

BONE HARPOONS FROM KUNDA, ESTHONIA. AND HORNSEA, E. YORKS.

ORIGINAL ARTICLES.

With Plate E.

Britain: Archæology.

On Two Bone Harpoons from Hornsea, E. Yorks. *Being the report of a Committee of the Council of the Royal Anthropological Institute.* 31

In MAN, 1922, 75, Mr. A. Leslie Armstrong published an account, illustrated by drawings, of two bone harpoons said to have been found in Hornsea, E. Yorks., for which, on the grounds of their position when discovered, their association with ancylus fauna and their type, he suggested belonged to the Maglemose culture. The harpoons were exhibited by Mr. Armstrong in Section H at the meeting of the British Association for the Advancement of Science held at Hull in September last, when their authenticity was questioned by Mr. T. Sheppard, Curator of the Hull Museum. The arguments put forward by Mr. Sheppard, which were subsequently embodied in a written statement, were briefly as follows:—

1. No other find of the kind is recorded from the area, though many workers, including the late Mr. Clement Reid, had watched the sections on the coast and excavations for docks for years.

2. The harpoons show a finish and a sharpness remarkable if they are of the age suggested and were found under peat, which has a strong corrosive influence on objects buried in it.

3. Pottery from the "pits" in which the harpoons were found is Roman or Iron Age.

4. Mr. Morfitt (the owner, and finder of one harpoon) had stated that he had found the harpoon with a pricker of iron at a depth of 14 feet. Allowing for coast erosion, say, 10 feet, this implied a total depth of 24 feet of peat. No bed of peat on the East Coast of Yorkshire showed one quarter of this thickness.

5. The discrepancy in the account given by Mr. Armstrong, who said the harpoons were found in lacustrine silt, and by Mr. Morfitt, who said they were obtained from boulder clay at the base of the peat, and the unsatisfactory explanation given by Mr. Armstrong that there were holes in the silt in which pieces of peat had been thrust.

On these grounds Mr. Sheppard affirmed that the harpoons had no claim whatever to any antiquity.

On 30th September, Dr. A. C. Haddon, F.R.S., Mr. Miles C. Burkitt and Professor J. E. Marr, F.R.S., examined the two harpoons at Cambridge and compared them carefully with four harpoons from Kunda, Esthonia, presented to the Ethnographical Museum by the late Professor McKenny Hughes (*see* Plate E., Figs. 1, 1A, 2, 2A). Their conclusion was that in type, general facies, colour and in the partially mineralised condition of the bone the Holderness harpoons were identical with those from Kunda. This identity was particularly marked in regard to the mechanical process adopted for the production of the barbs. The lines resulting from the cutting edge of the instrument used were, on each harpoon, clearly defined in the lower portion of the barbs—a method of workmanship characteristic of the Maglemose type of harpoon, and differing entirely from that of harpoons from the lake dwellings. The harpoons, they held, were genuine antiquities, their condition was consistent with their having been found beneath peat, and the evidence as to their provenance was considered satisfactory.

The matter having been brought to the notice of the Council of the Royal Anthropological Institute a Committee, consisting of Sir C. Hercules Read, P.S.A., Professor A. Smith Woodward, F.R.S., and Professor Percy F. Kendall, F.G.S. (nominated by the President of the Geological Society), was appointed to investigate the question.

The report of the Committee is as follows :—

Report of a Committee of the Council of the Royal Anthropological Institute appointed to report on the authenticity of two bone harpoons said to have been found in Holderness, E. Yorks.

The Committee met at the offices of the Royal Anthropological Institute, 50, Great Russell Street, W.C., on Wednesday, 6th December, at 5 p.m.

In addition to the members of the Committee there were present, Mr. A. Leslie Armstrong, Mr. E. N. Fallaize, Mr. G. A. Garfitt, Mr. G. W. Lamplugh, F.R.S., Mr. H. J. E. Peake, Mr. T. Sheppard, and Mr. Hazzledine Warren.

The evidence before the Committee was as follows :—

I. An article in MAN, September 1922, No. 75, describing and figuring the harpoons and stating the alleged circumstances of the discovery.

II. A written statement by Mr. T. Sheppard giving his grounds for questioning the authenticity of the harpoons, substantially in accordance with the remarks made by him in the discussion which took place when the harpoons were exhibited in Section H. at the meeting of the British Association at Hull in September last. [See above].

Mr. Sheppard supplemented his written statement by a verbal statement to the Committee at this meeting.

III. A further note by Mr. Armstrong embodying (a) a letter from Sir W. Boyd Dawkins, F.R.S., dated 20th September, 1922, in which he stated (1) that he had known the harpoons since the time of their discovery, and (2) that one of the harpoons had been broken in the post when he returned it to Mr. Morfitt. (b) A report by Dr. A. C. Haddon, F.R.S., Mr. Miles C. Burkitt, and Professor J. E. Marr, F.R.S., dated 30th September, 1922, giving the results of a detailed comparison of the Holderness harpoons with four harpoons from Kunda, Esthonia, now in the Ethnographical Museum, Cambridge. [See above].

The Committee also had before it the two harpoons and two portions of the femur of an elk said to have been found at the same level as the harpoons found at Skipsea Withow in 1903.

The Committee reports as follows :—

In general we see no evidence in the objects themselves that is conclusively against their genuineness.

A curious feature is that the workmanship of the barbs in the two harpoons is so similar as to point to their being the work of the same individual, though found 4 miles apart.

It is worthy of remark that at the time the earlier find was made there was no available example of a Maglemose harpoon.

Mr. Sheppard appears to have had strong grounds for doubting the authenticity of the harpoons, but the evidence on which his judgment is based is no longer verifiable. (Signed) C. HERCULES READ.

A. SMITH WOODWARD.
PERCY F. KENDALL.

The report was presented to the Council of the Royal Anthropological Institute and adopted at a meeting held on January 16th.

DESCRIPTION OF PLATE E.

Figs. 1 and 2.—Harpoons from Kunda, Esthonia, now in the Ethnographical Museum, Cambridge, $\frac{2}{3}$ natural size.

Figs. 1A and 2A.—The same from above.

Figs. 3 and 3A.—Harpoon from Skipsea Withow, Yorks., $\frac{2}{3}$ natural size.

Figs. 4 and 4A.—Harpoon from Hornsea, Yorks. Length of harpoon, 10 inches.

Britain: Archæology.

Barnes: Reid Moir.

A Criticism of Mr. S. Hazzledine Warren's Views on Eoliths. By A. S. Barnes and J. Reid Moir. 32

Mr. S. H. Warren, in a paper read before the Geological Society, entitled "A Natural 'Eolith' Factory beneath the Thanet Sand" [*Q.J.G.S.*, Vol. 76, pt. 3, No. 303, 1921, pp. 238-53] states that "experiment has shown that the mechanical movement of one flint grinding against another under pressure, will produce edge chipping similar in every respect to that which is seen upon the eoliths." This paper deals not only with the eoliths of the Kent plateau, but also with the Rostro-Carinate, and other Sub-Crag forms. Mr. Warren has studied a number of specimens of naturally-fractured flint found by him in the Bull-head at Grays in Essex. From a consideration of these specimens in the light of his views on flint fracture, he has arrived at the conclusions referred to above. If correct, these conclusions are of far-reaching importance; we propose, therefore, first to examine the credibility of Mr. Warren's beliefs in this matter, and, secondly, the correctness of his comparison between the Grays specimens and what he terms eoliths. Fortunately, this examination can easily be undertaken as Mr. Warren has set out in detail his views on flint-fracture in a paper entitled "The Experimental Investigation of Flint-fracture, and its Application to Problems of Human Implements" [*Journ. Roy. Anthr. Inst.*, Vol. XLIV, 1914, pp. 412-50], to which he refers us in the paper now under consideration. Mr. Warren, in his investigations, conducted a laborious series of experiments upon the fracture of flint, due to percussion, concussion, and pressure. We will now proceed to examine the scientific basis and the value of these experiments. It will, perhaps, be convenient to deal with Mr. Warren's ideas on flint fracture under the headings in which he has grouped them in his paper referred to above

1. THE CONDITION AND FORM OF THE MATERIAL.

Mr. Warren speaks of "flints which, if dropped on a hard surface, instantly fly into a large number of angular fragments." These "rotten" specimens are familiar to all workers in flint. He states that "the flaws in such flints are most commonly the result of the molecular strains set up by rapid changes of temperature." It would be of interest to know upon what actual evidence he bases this statement. It is common knowledge that the material of which such specimens are composed is not in its pristine condition, but is more or less altered in character. On what grounds, therefore, has our author omitted to mention chemical change, with its accompanying change in volume, as a possible cause of so-called "thermal" fracture? Mr. Warren states that the best flint for flaking purposes is that which has been freshly taken out of the chalk, and goes on to say that flint in *perfectly flakable* condition may be found abundantly in many of the Pleistocene gravels. It may be remarked, in this connection, that the Brandon knappers in winter prefer to dry and warm their flints by placing them near to a stove, rather than to use them direct from the chalk, and they state that the flaking quality of the flint is improved by this procedure. We are unaware that any experiments have been carried out on dry, unaltered flint with a view to determining its relative flakable qualities, and, in the absence of such evidence, we are unable to say whether any variation in flakability occurs. It seems probable that in sound, unaltered flint there may be some slight variation in flakability due to variable moisture content, but we are not in agreement with Mr. Warren's statement that this "introduces great complications into the results of all experimental flint chipping." Mr. Warren next passes to a consideration of form, and commences by asserting that "throughout all flint experiments, it is no less true with respect to form than it is with respect to condition, that an effect which is inevitable

"upon one piece of flint is unobtainable upon another, either by the same, or by any other mechanical process." We readily admit, and indeed desire to emphasise the importance of form in relation to facility in flaking, but this fact is well recognised by those who have made any study of the subject. Nor do we deny that, in certain cases, it may be possible to obtain an effect upon one flint which it is not possible to obtain upon another, of the same form, but of different dimensions. For example, one may obtain a cone of percussion on a nodule the size of a billiard ball, but not on a grain of flint sand. Mr. Warren's statement with regard to form, that an effect which is inevitable upon one piece of flint, is unobtainable upon another, is manifestly untrue as a generalisation.

If a steel ball be allowed to fall vertically, with sufficient force, upon the centre of one of the faces of a cube of flint of suitable size, it will produce, inevitably, a cone, or an incipient cone, of percussion. According to Mr. Warren such a cone could not be produced by the same, or by any other mechanical process upon a flint of different form from the first—for example, upon a flint of spherical form. This, of course, is quite incorrect. Mr. Warren states that "in obtaining raw material for flint experiments it is possible to select, at will, that which will give 100 per cent. failures, or that which will give between 50 and 100 per cent. successes." As a matter of arithmetic we should like to know why, if it is possible to select 100 per cent. failures, the percentage of successes is limited to between 50 and 100? We deprecate strongly this exaggerated emphasis which Mr. Warren places upon the variability of flint. On a pebble beach, for instance, it is perfectly easy to obtain almost any quantity of sound, and practically homogeneous material for experimental purposes. This holds true also for most localities in which flint is readily obtainable.

THE PLANES OF LEAST RESISTANCE.

Mr. Warren states that "flint fractures along certain planes of least resistance. Along these planes good flakes may be struck off with facility, while in other directions the flint may be battered repeatedly, and by more forceful blows without any success in the removal of a flake. These planes of least resistance sometimes tend to run parallel to the original cortex of the nodule, but they are greatly modified by irregularities in the toughness of different parts of the same stone." As a general statement this is quite untrue. Flint does not fracture more easily in one direction than in another, and does not possess "certain planes of least resistance." We know of no evidence whatever which shows that good, sound flint is not isotropic; that is to say, the elastic properties of flint are the same in all directions. Consider, for example, the case of a spherical pebble of flint from a sea-beach, and Mr. Warren's statement is at once seen to be incorrect. Very little, indeed, is known, at the present time, of the mechanism of fracture; the problem is a difficult and complex one, and it has not yet been solved. It is, therefore, somewhat distressing to find Mr. Warren rushing in with a confident statement on a matter in which, in fact, the elastic properties of the material, the form of the specimen, and the position of the point of impact relative to the boundaries of the specimen, are all concerned in a way which is not understood. Of these factors the elastic properties will be peculiar to flint, but the remaining factors will be common to all brittle materials. The solution of the problem depends largely upon the distribution of stress, as determined by the form of the specimen in relation to the point of impact. The solution will be found in the direction of the work done by Professor Coker in his investigations on "Photo-elasticity," and in the work of the British Association Committee (under the Chairmanship of Professor C. F. Jenkin), on "The Distribution of Stress in Materials," rather than in the assertions of Mr. Warren. The fact that a blow struck near to one of the boundaries of a block of flint may result in a flake being detached, whereas a blow struck near the centre

of the block will not remove a flake, is, we imagine, well known to all workers in flint. It has been a prime fact in guiding the fashioning of the material by man from the earliest prehistoric times, and in the fashioning of the material by nature from Eocene times to the present day.

It is almost impossible to follow the author further, owing to the confusion of thought and expression which he develops in connection with his pursuit of this subject. In connection with Fig. 3 of his paper, he states that the specimen figured was 39 mm. in thickness, and, in a note beneath the figure, he adds that the flint was plano-convex in form. We presume, therefore, that the author intended to state that the *maximum* thickness was 39 mm., and, in conformity with the plano-convex form, this thickness would diminish from the centre more or less regularly towards the circumference. The author tells us that this diagram is a sectional one, but he does not tell us, as he should do, where the section is taken. With regard to the blows delivered, Mr. Warren speaks of direction, but omits altogether to define the position of the blows relative to the boundaries of the flint in question. This leads to a mass of confused and erroneous results. For example, speaking of the direction of blows, the "alpha," and "delta" directions, as indicated by the arrows in the diagram, indicate blows which are parallel to one another, but delivered in opposite directions. Yet it is stated that blows in the direction "alpha" will produce free chipping at the edges with "an energy of 1.1 watts," whereas "in the 'delta' direction the impact of the blows was gradually raised to "29.4 watts, but the only result was further edge chipping in the 'alpha' direction "by the back pressure of the stones on which it [*sic*] rested." The fact of the matter is that blows delivered on the basal plane from the "alpha" direction, or delivered, upon the "plano-convex" surface from the "gamma" direction, would in each case produce free flaking, if the position of the point of impact were close to the edge of the specimen, whereas blows in the "alpha" and "delta" directions, if delivered on the centre of the basal plane, and of the plano-convex surface respectively, would produce cones and not flakes. The unsuitability of the author to discuss this matter is made clear by his employment of the "watt" as his unit of kinetic energy. The reader will scarcely need to be reminded that the watt is a measure of the *rate* of doing work, and that kinetic energy is equal to the product of half the mass of the moving body and the square of its velocity, and that it is not measured in watts. It is as though Mr. Warren attempted to measure distance in miles per hour. This error is repeated again and again throughout the paper, and robs the author of any right to speak with authority upon a subject, the scientific elements of which he clearly does not understand.

TECHNICAL DETAILS AND TABULATION OF EXPERIMENTAL RESULTS.

This section commences with numerous extracts relating to the elementary principles of mechanics, and it is evident that the author is here moving in an unfamiliar world of thought. In referring to his graphs, he speaks of *vertical* abscissæ and *horizontal* ordinates, in direct opposition to the accepted use of these terms. It is not surprising, therefore, on examining the conditions under which his experiments were carried out, to find that they are unscientific and stultify the results obtained. Thus, in the experiments in "direct concussions" the employment of a considerable variety of support, instead of employing similar conditions throughout, leads to discordant and incommensurate results. In order to obviate this, the author manipulates the figures until he gets what he describes as the "estimated favourable result." We need hardly say that results obtained by such methods are worthless. With regard to the Sled experiments, Mr. Warren has made no measurements of the effective pressures exerted upon the fixed stones, and this fact alone renders his results valueless.

It is known, by experiment, that the edges of flints showing "secondary" flaking produced by pressure, exhibit, usually, a markedly even, non-engrailed appearance. This lack of more or less sharp points and "spurs" such as are produced so freely when modifying the edge of a flint by percussion, is due to the practically uniform crushing effect of one stone upon another, over the area in which the edge-flaking is taking place. The result described can, perhaps, best be seen and understood when a flint with a suitable flakable edge is pressed upon a rounded pebble. If this is done, it will be seen that, while the pressure is applied, very small and thin flakes are being removed continually from the edge of the flint where it is in contact with the pebble, and that a hollow, corresponding closely to the outline of that portion of the latter which is in contact, is formed in the edge of the uppermost flint. Further, the surface of the pebble, being more or less smooth, it will be realised that as it, so to speak, "eats" its way into the edge of the other flint, no marked inequalities can be left in the resulting pressure-flaked edge. Moreover, the edge of the uppermost flint gives way only little by little, with the result that thin and minute flakes are removed from its edge. Such thin plates, or scalings, leave very shallow flake-scars upon the parent flint, and the shallower a flake-scar, the lower will be the elevation, or ridge, between it and those on either side of it. Thus, the hollow produced in the edge of a flint, by pressing it upon a rounded pebble, will have a markedly even and characterless appearance. There can be no doubt but that the above-described peculiarity can be observed in most flake-scars produced by pressure in whatever manner applied.

If we now turn to Mr. Warren's paper* (*Q.J.G.S.*, Vol. LXXVI, No. 303, 1921), in which he describes the pressure-fractured flints found at Grays, we find that, out of nineteen drawings of specimens exhibiting "secondary" flaking, no less than fourteen show an even and "characterless" edge, such as is quite typical of pressure fracturing.

We are unacquainted with any real Harrisonian eoliths which exhibit the peculiar type of edge-flaking of the Grays specimens. Even in their present abraded condition, which tends to mask the characters of their flaked edges, they testify to the fact that they have not been flaked by the same agent of fracture as operated at Grays. If some of the specimens from the latter locality could be subjected experimentally to some kind of abrasive action such as that to which the Harrisonian eoliths have been subjected, the difference between the two types of edges would be even more accentuated. If Mr. Warren had claimed that the edge-flaking upon his Grays flints resembled that to be seen upon the edges of certain palæolithic implements he might have had some sort of case. But it is incorrect to state that the Harrisonian eoliths exhibit edge-flaking really comparable with that upon the Grays specimens. Such a conclusion on Mr. Warren's part arises from the fact that, to him, apparently, all edge-flaking upon flints produced from whatever cause is the same. This, however, is not the case, and it would have been as well if he had made a closer study of this question before publishing his paper. When we proceed to examine the illustrations of the specimens described as "The Rostro-carinate Group" and compared by Mr. Warren with the beak-shaped flints found beneath the Red Crag of Suffolk, we find ourselves wondering whether the author is not here indulging in humorous, rather than in scientific, statements. We would ask anyone interested in this question merely to compare the illustrations of the "Rostro-carinate Group" described by Mr. Warren, with the illustrations of the Sub-Crag beak-shaped implements figured, for instance, in Sir Ray Lankester's *Phil. Trans. memoir* (Series B, Vol. 202, 1912). Such a comparison will at once show that, even as regards general form there is little resemblance

* One of us has already criticised this paper. See *Geological Magazine*, Vol. LVIII, pp. 187-9, April, 1921.

between the two series mentioned. When, however, an examination is made of the kind of flake-scars observable upon the Sub-Crag, and the Grays specimens, it is seen that the divergence of the two series is complete.* There have never been found, beneath the Red Crag, flints showing the kind of flake-scars illustrated by Mr. Warren. And he is simply making quite misleading statements when he claims that the specimen shown in Fig. 19B closely resembles one of the Sub-Crag type specimens preserved in the British Museum, and that the curious and obviously non-human flint illustrated in Figs. 21 and 21x resembles the celebrated Sub-Crag "test-specimen" on a slightly smaller scale. This opinion, coming from anyone claiming a knowledge of the scientific meaning of language, is, indeed, surprising. Also we fail to understand how the specimen shown in Fig. 14, Pl. V can be claimed as "an unfinished rostro-carinate in the making." Why should this be said to be a *rostro-carinate* in the making? It might represent any type of implement in the making, or it might be regarded by enthusiasts like Mr. Warren as a "core" from which flakes were being removed! In our judgment, however, no one with a real knowledge of such matters would take it for other than what it is, viz., a particularly rough example of nature's handiwork. Mr. Warren has been so good as to send to one of us some examples of the flaked flints found at Grays, and we do not hesitate to affirm that they present all the characteristics of fracture by natural pressure, and that they bear no relationship to either the Harrisonian eoliths nor to the Sub-Crag specimens. For Mr. Warren to maintain that they do bear such a relationship, is merely to darken counsel, and to add to the already large number of incorrect statements made by certain observers ever since flint implements of any kind were discovered. As a final example of our author's confusion in regard to these questions, we may quote, without comment, his description of certain marks (in reality incomplete incipient cones of percussion) produced upon the surface of a flint, when the point of another flint passes over that surface under pressure, as "V-shaped incipient fractures," and that, until Mr. Warren's discovery at Grays, the *écaillage* upon the bulbar surface of a flint flake had been regarded as the "exclusive character of the human blow."

A. S. BARNES.

J. REID MOIR.

Balkans: Ethnography.

Durham.

A Bird Tradition in the West of the Balkan Peninsula.

By M.

33

Edith Durham.

The fact that a considerable proportion of the people of the Western side of the Balkan peninsula even to-day identify themselves with birds, and that a mass of traditional songs shows that the belief is ancient, has not, so far as I know, received the notice it deserves. Briefly the facts are as follows.

The Albanians in their own language call themselves Shkypetars, their language Shkyp, and their land Shkyperia or Shkypnia. They derive this from "Shkyp," an eagle, and say, "we are the sons of the eagle, our land is the land of eagles." Beyond a vague idea that to kill an eagle is unlucky I have learnt no particulars. But in Plutarch's "Life of Pyrrhus, King of Epirus," who is still a popular hero in Albania, it is of interest to find that after his great victory over the Macedonians his Epirots hailed him as the "Eagle." The mediæval chieftain Skenderbeg adopted an eagle for his banner, and the eagle has been chosen as the crest of the newly-formed Albanian State.

* This conclusion is corroborated by the opinion of the International Committee of Archaeologists and Geologists who visited Ipswich last year. After leaving Suffolk certain of them examined Mr. Warren's pressure-flaked material, and rejected it as having any bearing upon the Sub-Crag implements. The Committee regard these latter specimens as of unquestionable human origin.

Passing from Albania into Montenegro (now merged in Yugoslavia) I found a very strongly marked tradition. As all maps up to the end of the eighteenth century, and indeed into the nineteenth, merely mark Montenegro as a part of North Albania, and as much of the tribal law and custom was the same in both lands till 1865, it is not surprising to find that all Montenegrins also are birds. But, in this case, falcons (*soko*, pl. *sokolovi*). This word is used in common parlance. When I tramped the country my guide hailed everyone we met on the way with "Whither will ye, my falcons?" or, "Forward, my falcons!" (*napried sokolevi*), and so forth. Every officer addressed his men as "*Moji sokolovi*" (my falcons). I have heard this again and again. There is also a verb derived from "*soko*," "*sokoliti*," to urge on, or incite. *Soko*, *Sokol*, and the derivatives *Sokolitch* and *Sokolovitch* are common enough names among the South Slavs.

The Montenegrins have a dance (Fig. 1) which seems to be unknown in Serbia. A pair or two pair of dancers stand opposite each other and dance at each other, retiring, advancing and performing various steps and finally leaping as high as possible



FIG. 1.—MONTENEGRIN KOLO DANCE.

into the air, flapping their arms and uttering wild yells. The leaping, flapping, yelling dancer is said to represent a falcon or eagle. When danced at night by a big bonfire it is extraordinarily picturesque. I once saw this danced by a North Albanian tribesman, and was told it was Albanian. But the Albanian tribesmen very rarely dance, whereas the Montenegrins seldom lost a chance of doing so.

The custom of death wailing was universal when I was in Montenegro. In these

wails a large number of stock phrases are used, interspersed with howls and shrieks of "*Lé lé lé lé!*" The men of the tribe when approaching the house of the deceased cried:—

"Zhao ni za tebe
Moj' krilati brate!"

(Woe is me for thee, oh my wingéd brother.) I could get no explanation of the word "wingéd" except that "we always say it," or "it is our custom," and at first supposed it meant an angel. But taken along with the other facts it probably indicates that the man was a "*soko*," and also, as we shall see later, a brave man entitled to wear plumes.

The use of the word *soko* for a fighting man is so common in Montenegrin songs that I could easily fill a page with quotations. Grand Voyvoda Mirko, father of the late King Nikola of Montenegro, a wild man of the mountains, whose life was occupied alternately with border fighting and composing ballads on his frays, supplies any number of examples in his "*Junachki Spomenik*" (Heroes' Monument), dealing with the fights between 1852 and 1862. "Voyvoda Jovo was drinking wine in his tower at Banyani. With the Voyvoda were three hundred falcons . . . Among them, two grey falcons, both heroes, Sirdar Stepan Radoyev and Sirdar Djoko of Banyani." In "*The Avenging of Pope Radosav*," the Kapetan cries that he has news from Biyelopavlitch "that the Turks have broken faith and killed that grey falcon Pope Radosav . . . Now up with ye, my falcons, let us

"go and avenge him, etc." Briefly, almost everyone is a falcon, and the leaders urge on (*sokoliti*) their men. The thing becomes comical when we are told "three grey falcons sat drinking wine before the inn." The names of three chieftains are then given. I have heard a love song yelled: "Thou art the swallow bird—" "I am the grey falcon" who will swoop and carry you off. Whether this song was old or new I do not know.

The use of the term "soko" to denote a warrior is very much more frequent in the ballads of Montenegro than in those of Serbia (in the pre-War sense). Thus in those concerning the Serb rising led by Karageorge at the beginning of the nineteenth century I have found scarcely an example.

Turning to the old ballads, of which large numbers have been collected and published, we find many curious facts about falcons. Falcons carry special messages to Serb chieftains. Want of space prevents quoting these tales in entirety, though many well deserve it. In "The Sons of Ivan Beg" (about 1510) given in Ogledalo Srpsko, the chief Montenegrin collection of traditional ballads, Ivan Tsрноievitich, Prince of Montenegro, drinks wine at Cattaro with some comrades. A grey falcon hovers over the market-place. The Montenegrins try to hunt it into a corner and catch it, but it soars aloft. Ivan then wraps his cloak around his shoulders and calls to the falcon, which settles on his shoulder and gives him a letter from under its wing which it has brought him from Stamboul. Ivan addresses it as "My falcon, thou black news carrier." And they have a long talk about Ivan's renegade son Stanisha.

The falcon as influencing the fate of the Serb nation appears in one of the Kosovo cycle songs (see collection of Vuk Karadjitch) thus: "A falcon, that grey bird, flew from Holy Jerusalem and carried a little swallow. This was not a grey falcon, but holy St. Elijah. He did not carry a swallow, but a letter from the Holy Mother of God." This letter tells King Lazar how, by losing the coming battle of Kosovo (1389), he may save his own soul. Which he accordingly does! Among the songs about that most popular hero, Marko Kralyevitch, are some references of much interest. Marko, of course, is often referred to as a falcon. He is described as winning a shooting competition against the Turks by using an arrow fledged with six falcon feathers. Two songs describe the love that exists between him and falcons, "Kralyevitch Marko fell sorely ill by the wayside. He thrust his spear in the ground and tied his horse Sharatz to it. And Marko cried aloud: 'Who will bring me water to drink? Who will make shade for me?' Down there came a grey falcon, and brought water in its beak, and spread its wings over him. . . . And Marko said: 'Oh falcon, my grey bird, what good have I done thee that thou shouldst bring water and make shade for me?' And the falcon said: 'Don't be silly, Marko! When we were in the fight at Kosovo the Turks took me and cut off both my wings. Then didst thou take me and set me up on a green fir tree that the Turkish horses might not trample me, and fed'st me with the flesh of heroes, and gave me blood to drink. Thus hast thou done me a good deed.'" In a longer version the bird is an eagle. Marko rescues it from the battle, and also saves its nestlings from a burning tower, and feeds them "for a month and one week more." In a third song Marko goes a-hunting with the Turks, and his falcon when flying at a duck is shot by a Turk with an arrow, and falls with a broken wing. In barbarous times bloody vengeance for a favourite horse or hound is not impossible. But Marko's conversations with his falcon seem to show a more intimate relation. The wounded bird settled on Marko's shoulder and cried ceaselessly. Marko riding home with it asks: "How art thou, my falcon, without a wing?" and the falcon said: "I am like one that has no brother. Had I a born brother I would not lament my wing, for he would avenge me." . . . And Marko said: "Fear not, my grey falcon. An thou hast no brother, thou hast

Marko, who will be no worse than a brother to thee." Marko arrives home and sends for a doctor, who dresses the falcon's wound. News comes that seventy Turks have been harassing a neighbouring village. Marko, single-handed, kills everyone of them and returning home remarks: "Now fear not, my falcon. Thou knowest thou hast a brother. So long as Marko lives the Turks will never forget thy wing." Marko was an historical personage (end of fourteenth century), son of Vukashin, chieftain of Scutari, in Albania, when that district fell under Serbian rule. That is, he hails from the very district where the falcon legend still prevails.

In one ballad, "Childe Jovan and the Daughter of Tsar Stefan," we seem to have a reminiscence of actual descent from a falcon. The local colour is mediæval Serbian. Tsar Stefan of Prizren must be Stefan Dushan, who reigned from 1336-1356. But the tale is obviously an ancient one tacked on to a later celebrity. Briefly, the Tsar's daughter is found to be pregnant. Charged by her father, she confesses. According to custom she lives shut up in a sort of harem. "One morning I arose early . . . I went out on to the white tower and put the crown upon my head, to see how it suited me, until the sun rose in the east. When the crown saw the sun, beams of light flashed from the crown . . . as far as the Shar mountains where the falcons nest. And the beautiful *Vilas* (fairies, spirits) are with them. . . . When night came . . . a grey falcon came flying, and with him seven swans from the Shar Mountains and Jastreb. The swans alighted on the tower, the falcon upon my window sill. The tower shook. Light streamed forth from the falcon so that my golden cage (harem) was light at mid-night as at midday. The falcon shook its wings and stood there a youth in a thin shirt. He stayed the whole night, and left early at morn. Never again has he returned to me, and by him am I with child." The Tsar drives out his daughter, and she seeks her lover. She is guided partly by the sun. By the help of his old mother she finds the tower of her falcon lover, and upon it is a golden ball with falcons' wings (Is this a trace of Egyptian cults?). His mother, to prevent her son from again flying away, steals his falcons' feathers while he sleeps, and he is in consequence killed by the jealous *Vilas*, who will not permit him to have a human wife.

Has this tale of a falcon and the sun any remote connection with the bird chariot of the sun found in Bosnia? Has it been handed down from prehistoric times to the now completely Slavised population? The tale is evidently fragmentary, for we are never told whether the falcon's child is born.

In the two versions of another tale: "Sekula Changes Himself to a Dragon" (Vuk Karadjitch Collection, Vol. 2, p. 498) we find an actual statement of relationship to the falcon. The tale purports to be an account of the second battle of Kosovo, that fought by Janos Huniades against the Turks on 17th-19th October, 1448. Knolles, writing in 1620, says: "Zekell Huniades, his sister's son, was the first of the leaders there slain in the thickest of the Turkes." The ballad clothes this historical fact in a myth. Huniades figures in Serb ballads as Sibirja Yanko (John of Sibirj, or Hermannstadt, in Transylvania, of which he was Voivoda) Yanko makes ready to ride to Kosovo, and takes with him his sister's only son—young Sekula—in spite of the urgent remonstrances of his sisters and his mother. The maidens of various places they ride through foretell Sekula's death, and beg him to stay with them, in vain. When they reached Kosovo plain they spread their tents and Voivoda Yanko said: "Up with ye, my falcons! Keep guard against the Turks while I sleep a while." Sekula said to Yanko: "Oh, uncle, (*ujko* = mother's brother), go thou now and sleep a while. I will steal to the Turkish camp and change myself to a six-winged dragon, and will bring thee the mighty Sultan in my teeth in the form of a falcon. When thou risest up from sleep, oh uncle, do not let reason give way to madness! Shoot not the six-winged dragon, but shoot the grey falcon." Yanko slept, and Sekula stole to the Turkish

camp, changed himself to a dragon, and duly alighted on Yanko's tent with the Sultan in his teeth in the form of a grey falcon. All the warriors roared at once: "In an evil hour hast thou lain down, oh Voyvoda Yanko, and in a worse hast arisen." Yanko leapt to his feet and seized a golden arrow. He thought, and thought at once: "Why should I shoot the grey falcon, for I am myself a falcon, and of the race of falcons. Better that I shoot the six-winged dragon." He shot

an arrow from his golden bow, and shot the six-winged dragon . . . it hissed and loosed the falcon. The falcon arose to the clouds and flew to the Turkish camp. The dragon fell to the ground. Voyvoda Yanko hissed for rage, and his sister's son Sekula said to him: "Oh, Uncle Yanko, did I not tell thee not to change reason for madness—that thou shouldst not shoot the six-winged dragon but shoot the grey falcon?" Sekula dies of his wound, and the tale ends.

The fact that Sabinja Yanko, who was not a Serb but a Vlach, should claim

Deli or Zataznici



FIG. 2.—A DELI—FROM A SKETCH BY NICHOLAY (1568).

kinship with the falcon is at first puzzling. But the fragments of a much more elaborate version explain it. In this version, when Yanko awoke and saw the dragon on his tent he called to George Ban Despot (the Brankovitch), who was then Prince of the Serbs under Turkish suzerainty: "Oh, my brother in God, George Ban Despot, dost see the great marvel upon my white tent? A six-winged dragon hath seized a grey falcon. The falcon is hissing like a serpent. Shall I kill the dragon or the falcon?" And George Ban Despot said to Yanko

of Sibinja: "Are we not of the brood of falcons, and the Turks are a brood of dragons?" "Strike the dragon, do not strike the falcon." Yanko shoots three arrows. The dragon only looses the falcon when mortally wounded by the third arrow. Sekula, dying, upbraids his uncle as in the former version. This version is in all probability the original one. For here it is the Serb, George Brankovitch, who claims kinship with the falcon, and obtains the liberation of the Sultan. Historic truth lurks beneath the allegory, for George betrayed Huniades, and so led to his defeat at Kosovo.

That eagle plumes were actually recently worn as a mark of heroism is shown by the following account taken from "Les Quatres Premiers Livres de Navigations et Pérégrinations de Nicholas de Nicholay," 1568. He was French Ambassador to the Sultan, and gives a detailed account of the many types of people he came across, with elaborate drawings. Among them one of a *Deli* (=brave fool, crazy warrior) (Fig. 2). These formed part of the retinue of the Pashas and Begs, and were, in fact, the Bashibazouks of those days. "These," he says, "are adven-

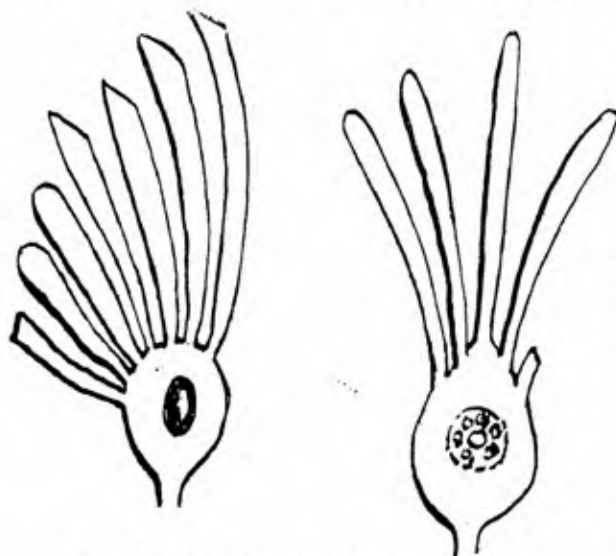


FIG. 3.—CHELENKAS IN SARAJEVO MUSEUM.

turers who . . . follow the Turkish army voluntarily and without payment, "except that they are fed "and kept at the expense of "the Bashas, etc., who have "each a number in his suite. "These fellows are inhabit- "ants of Bosnia and Serbia. " . . . The first I saw "was at Adrianople. His "coat and large breeches "were of the skin of a "bear with the fur outside. " . . . On his head he "wore a bonnet . . . "hanging over one shoulder, "made of a leopard skin well "spotted, and in front of it, "to make him look the more "furious, he had fastened the "great tail of an eagle. And "its two wings were fastened "with gilt nails to his targe, "which he wore slung at his side. . . . I was curious as to his country and religion. "He said he was of the Serbian nation, and as to his religion, he was now living "with the Turks and so dissimulated, but by birth and heart he was a Christian. " . . . I asked why he went so strangely clad, and he said it was to make "himself look the more furious to his enemies. As for the plumes, none might "wear them but such as gave proof of valour. For among them these plumes "were esteemed as the true ornament of a valiant man of war."

Nicholay's description is confirmed by one of the ballads of the celebrated Heyduk, Old Man Novak, who carried on the profession of brigandage with great *éclat* at about the end of the fifteenth century, in Bosnia. In the "Marriage of Gruitz Novakovitch" (Vuk Karadjitch Collection, Vol. 3), Old Man Novak, when going out to fight the Greek whose bride he has snatched for his son Gruitz, dresses himself "in terrible clothing" made of a bear's skin. A wolf's head with an eagle's wing in it forms his cap, and his eyebrows are made of owl's feathers.

Another celebrated chieftain, Relja, who ruled the Novipazar district, and is said to have died about 1343, is known in the ballads and in national tradition as

Relja Krilatitza—Relja the winged bird, or as Relja Krilati, winged Relja. Thus, in "The Sister of Lek Kapetan" (Karadjitch, Vol. 2) "now shalt thou behold a " beautiful bridegroom, Winged Relja! A winged warrior is no joke!"

In a great number of songs the various heroes are described as wearing fur caps, with silver plumes called *chelenka* in them. These are described as being given as rewards of valour, some wearing ten or a dozen. A few specimens of these old *chelenka* are in the Sarajevo Museum. I give sketches of two (Fig. 3). They have coloured stones set in them, which at first sight suggest peacocks' feathers. Nevertheless they may, I think, be taken as a stylised wing and tail.

The bodyguard of the late king of Montenegro was formed of picked men who were known as *Perianitzi*, from *perianik*, a plume wearer. I was told that until recent years these men wore eagles feathers in their caps.

I possess a Montenegrin *gusle* (musical instrument) carved by a peasant of Nyegushi as lately as 1902. Its head is formed by a grotesque carving of Milosh Obilitch, who killed Sultan Murad in 1389. On Milosh's cap sits a dicky bird, which, I was told, represents the *sivi soko*, and indicates that Milosh was *dobar junak* (a great hero). It is a far cry from the prehistoric bird-chariot of Bosnia to my Montenegrin *gusle*. And it would be rash to say that they have any connection. But that a form of bird cult has existed continuously for a very long period on the western side of the Balkan peninsula seems clear.

The very recently formed gymnastic clubs of the Czechs, which have been the most popular and efficient form of nationalist propaganda, are called *Sokels*, and the members wear a falcon's feather in their caps. But whether the Czechs have a falcon tradition of their own, or if they adopted the term from their Slav neighbours further south, I have not been able to ascertain.

M. EDITH DURHAM.



FIG. 4.—HEAD OF A MONTENEGRIN GUSLE.

REVIEWS.

America: Archæology.

Joyce.

British Museum Guide to the Maudslay Collection of Maya Sculptures. (Printed by order of the Trustees). London, 1923. Pp. 93. Price, 1s. 6d.

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This guide is written by Capt. T. A. Joyce, who arranged the exhibits for exhibition. Capt. Joyce possesses an extraordinary gift for making a lucid and accurate summary of an intricate subject and in the present work he has given not only a full description of the Maudslay exhibits but also an excellent introduction to the Maya Calendar as a whole. Every part of the subject is dealt with and examples of glyph reading are given, besides a discussion of the readings of all the inscriptions exhibited. In addition, he gives two convenient tables for computation resembling Goodmand's

Katun Table and Ahau Table, but modified so as to be a substitute in four small pages for Goodman's Archaic Chronological Calendar.

It is satisfactory to this reviewer that he maintains the same correlation with Christian chronology as in his *Mexican Archaeology*. The date 1-18-5-3-6 is, however, equivalent to B.C. 2888 not to B.C. 2819, as stated on p. 67. This is probably a clerical error. In matters of terminology he does well to follow Bowditch in using "Face character" and "Animal" instead of "Head variant" and "Zoomorph;" but the spelling of Kukulcan for the god Kukulcan and "kan" for "can," "snake," is not to be commended. It is true that Maya c is like the English k, but the Maya k is a distinct sound. The Maya, like most languages with numerous monosyllables, has many words with several different significations, and to write distinct sounds with the same letter makes the confusion worse. *E.g.*, "can" means both "four" and "snake," and the spelling "kan" would confuse it with "kan" which means "yellow" and also is the name of a day sign.

The author rightly does not attach too much importance to stylistic questions. The style of a monument is a most valuable check on other data as to its age, but this has been carried too far by some writers, so as to contradict the dates. The objection to Professor Morley's views as to the higher time periods that the signs for these periods include "ending signs" in their composition does not seem to be a grave one. The cycle glyph similarly contains a hand which is a zero and an ending sign and the tun glyph, a fleshless jaw as in the numerals over 10. Probably all these signs at first had a vague meaning of ending or completion and as the Mayas developed their numerical system the signs were specialised.

It is well that at last the great work of Maudslay has been exhibited, and explained in this excellent guide. The illustrations are good and well chosen to elucidate the text.

RICHARD C. E. LONG.

Archæology.

Matthews.

Mazes and Labyrinths: a General Account of their History and Developments. 35
By W. H. Matthews, B.Sc. London: Longmans, Green and Co., 1922. 8vo., pp. xviii + 253, with 151 illustrations. Price, 18s. net.

This book is excellently characterised in its title. Its author, combining clearness of statement with a happy knack in his selection of illustrations, gives us, in a series of chapters, general accounts of the Egyptian, the Cretan, and the Etruscan labyrinths, and of the history and legend connected with them; of labyrinths in ancient art and in association with churches; of turf labyrinths and stone labyrinths, and of certain traditional customs in which they have a part; of the "Dance or Game of Troy"; of rock-engraving labyrinthine in design; and of maze-etymology. There are other chapters as well, which deal with matters such as garden labyrinths, the design and solution of mazes, the labyrinth in literature, and maze-toys, which are of interest to the general reader rather than to the ethnologist. Mr. Matthews has managed to produce a volume which not only is sure to prove attractive to the non-specialising reader, but which also gives the student of ancient customs and beliefs direct access to much valuable material and, in an extensive classified bibliography, indications of where he is likely to find the fullest information available connected with any particular branch of the subject. The book's value to the student is enhanced by the excellent index with which it has been provided.

It is naturally impossible, if a book of this kind is to be issued at a price which will permit of the satisfaction of its appeal to the general public, for it to enter as elaborately as specialists might wish into comparatively minor details of the several aspects of its subject. There are, however, some of those aspects which seem to

promise the investigator results of considerable importance could satisfactory answers be obtained for certain questions obvious enough to anyone who even glances through the book. Of various attempts to find solutions for at least some of these questions, brief accounts are given. In the present reviewer's opinion, an unprejudiced study of the folklore—especially that connected with the stone and the turf labyrinths, the Troy dance or game, and maze-etymology—associated with labyrinths, of a closer and more detailed nature than anything which seems yet to have been carried out, might yield, in proper hands, results of very great importance to students of submerged religion, of the prehistoric movements of populations, and of early transmissions of culture. It is also likely to help in the elucidation of the true relationships—if such there were—between certain ancient structures known traditionally as labyrinths and certain practices still surviving—conceivably as their modern representatives, in a direct line of descent, of practices earlier than the structures in question. Such a study should examine in minute detail all the available accounts of folk-practices, wheresoever recorded, in which mazes have a part, especially in the relations of those practices to the calendar, and without reference to preconceived notions as to worship of any particular sort. The affection for and the interest in his subject which make his book so pleasantly readable, and the care with which it has been compiled, indicate Mr. Matthews as probably the student most competent to undertake this work. There are doubtless many other persons, besides the present reviewer, who would be grateful to him were he to give us, in the pages of some publication devoted mainly to the interests of the specialists concerned, a further compilation and study, along the lines suggested, of labyrinthine material.

W. L. H.

Britain: Ethnology.

Fleure.

The Races of England and Wales: a Survey of recent Research. By H. J. Fleure, D.Sc. London: Benn Bros., Ltd., 1923. Pp. 118. 19 × 13 cm. Price 5s. net.

36

Hopes of further advance in the science of Physical Anthropology seem to lie in steady laborious spade work, literally, as well as metaphorically, rather than in brilliant suggestions and fascinating theories. Laborious spade work is often as dreary to read about as to carry out, and often too an honest worker may seem to have nothing but negative results to show after many years' toil. Sooner or later, however, even the neutral tones of the negative results fit into their proper places in the great mosaic pattern, but they have to be continually turned over and sorted and rearranged by cunning fingers, moved by quick brains which understand the pattern as far as it has gone.

This little book of Professor Fleure is work of this kind—an attempt to bring the story of the British people up to date and to pick out from the masses of detail, furnished by recent workers, the points which, in his judgment, advance our knowledge, even though it be only a little.

A spade worker himself of proved honesty and patience, he has treated the work of his colleagues with fairness and sympathy, viewing it from a perspective which they were often too near to attain and showing how two or three cross-bearings taken from different angles, give valuable clues where one alone would have been practically valueless.

The man in the street of average intelligence will obtain in this little book, for a few shillings, as fair an account as any one writer could give of the present state of our general knowledge of the Physical Anthropology of the British Isles and is shown, moreover, where to go for further and more specialised information if his interest is aroused.

Undoubtedly more and more people are taking, each year, an interest in the study of Man; and it is most important that books of this kind, written by authors

who really know their subject, should appear at frequent intervals and be read as widely as possible.

F. G. PARSONS.

CORRESPONDENCE.

Europe: Archæology.

Burkitt.

To the Editor of MAN.

37

SIR,—**The Ice Age and Man.**

IN "MAN"* Mr. Reid Moir suggests, in reply to a previous article of mine, that the Lower Palæolithic implement found in a deposit resting on the moraine of the last but one glaciation near Conliège may be derived from much older material and therefore not of post-Riss age. This possibility would scarcely have escaped M. Boule who published the find and its significance in *L'Anthropologie*, t. XIX, 1908; and further the specimen, judging from the figure given, is hardly rolled at all. If it had been derived from much older material this excellent specimen would have shown signs of rough handling. I rather fancy that the problem is really different. Mr. Moir has been finding an industry of Lower Palæolithic type in much older deposits at Cromer and the question becomes one of nomenclature. But I do not think it is going to be found possible to demonstrate that all the Chellean on the continent is really older than the Riss-Würm interglaciation. For me at any rate, after a study of the work done in this connection by various prehistorians including M. Comont, there can be no doubt that a part of the Chellean occurred during Riss-Würm interglacial times, though it seems equally clear that a Chellean (*i.e.*, an industry of Lower Palæolithic type) occurred at an earlier date—naturally on the whole rougher in technique. In Western Europe there does not seem to have been any great change in people from early Pleistocene times till the end of the Acheulean period, for there is no sudden appearance of new types of tools. The industries show a more or less steady development. By rights, therefore, Acheulean = Upper Chellean, and industries of early Pleistocene times (such as have been found at Cromer) should be called Lower Chellean. But then the word Chellean would simply be synonymous with Lower Palæolithic and therefore useless. Surely it is wiser to retain the name Acheulean for the ovate industrial development occurring at the end of the Riss-Würm interglaciation: Chellean for the industries, associated with a warm fauna, of the same interglacial period: and to use another word for the fairly similar but still earlier industries. I myself use the word "Prechellean," but "Old-chellean" or anything else would do equally well as long as there is uniformity in its use.

May I also say in reply to Mr. Warren's letter in MAN†, that I fear he has chosen a bad time to try to drag me into a controversy. I do not fancy he would have succeeded in any case, as it always seems to me that controversies merely induce a general atmosphere of acrimony without really settling anything. Mr. Warren has stayed with me at Cambridge and the questions have been argued with specimens before us; other readers must be weary of this well-worn road of arguments! However the chief reason that makes a wordy warfare impossible is that very shortly I shall be going abroad for some considerable time. Mr. Reid Moir will, I am sure, always be willing to oblige and for these early finds he is, of course, much more competent than I am. A small point in favour of the latest Tertiary finds being really of human workmanship seems to me to lie in the number of converts that Moir has made to his ideas. I mean such redoubtable folk as Breuil and Capitan.

I am, Sir,

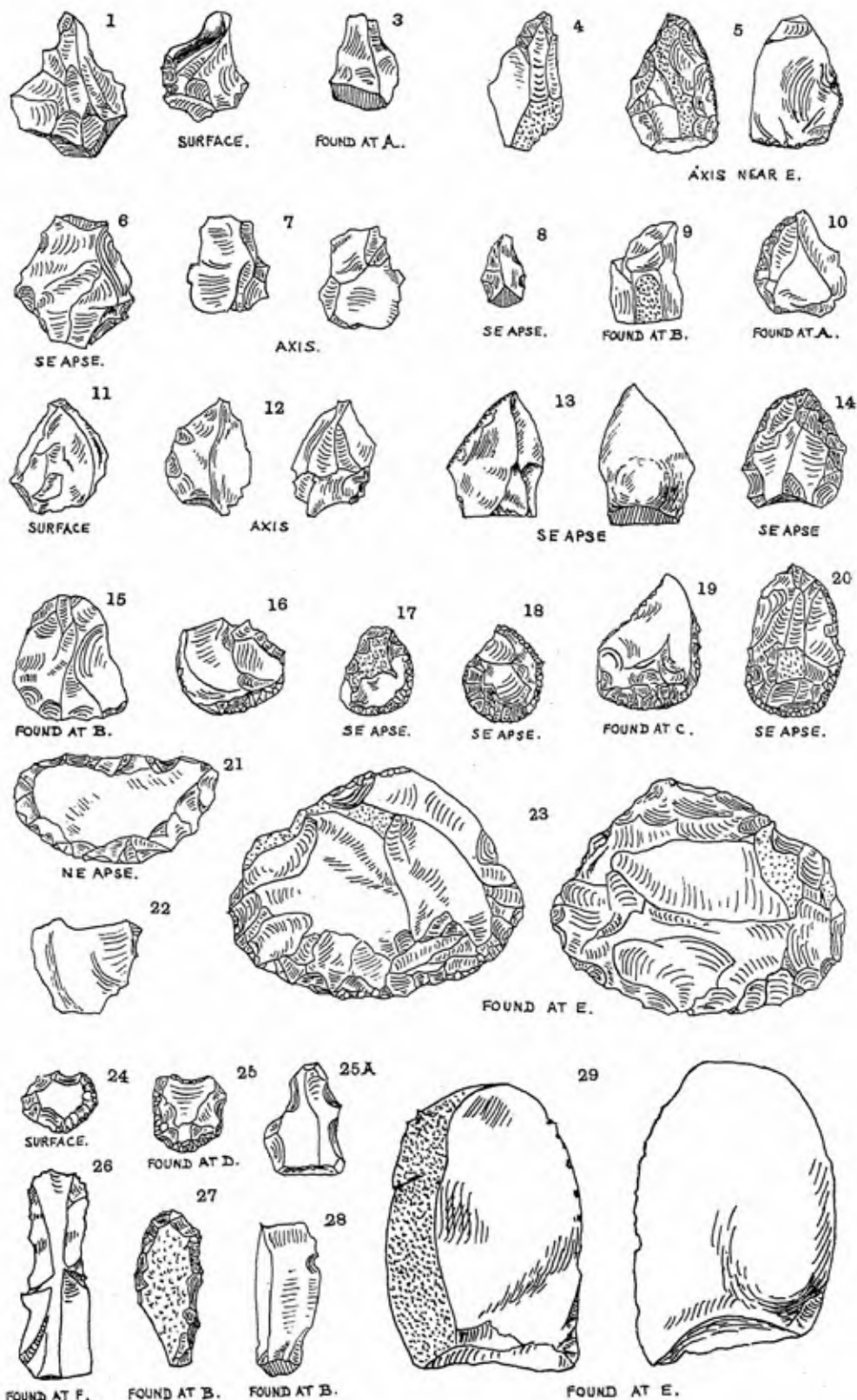
Yours faithfully,

M. C. BURKITT.

* See MAN, 1922, 104.

† See MAN, 1923, 29.

SCALE 1:2



STONE IMPLEMENTS FROM BORG EN NADUR.

ORIGINAL ARTICLES.

With Plate F.

Malta: Archæology.

Murray.

Stone Implements from Borg en Nadur. *By M. A. Murray.***38**

The megalithic ruins of Borg en Nadur overlook the little harbour of St. George, which forms part of the great bay of Marsa Scirocco on the south-east of Malta.

During the excavations carried out on this site last summer by Dr. Edith Guest and myself, about thirty stone implements were found, chiefly in the apsidal building and under the pavement west of the "dolmen" (at the spot marked B in the plan Fig. 1). At B were also found thin flakes and small scraps, which appear

BORG EN NADUR
SKETCH PLAN.

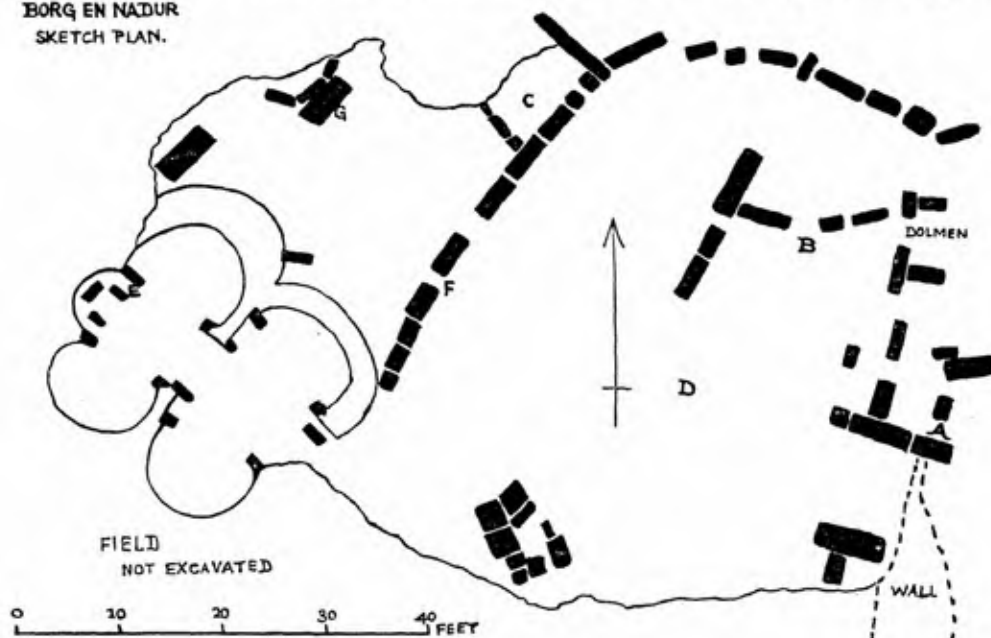


FIG. 1.

to be the refuse left after making or sharpening an implement. Though all the implements, even those from the surface, were found within the limits of the plan, the exact spot was not noted in a few cases.

The implements have been examined by Professor Garwood, and I am indebted to him for the identification of the material of which they are made. Except where noted, all are of chert, probably a local variety.

1. Sedimentary quartzite.
4. The underside shows very markedly a rippled effect in the flaking. Cutting edge on one side.
7. Worked on both faces. Cutting edge at end.
9. Cutting edge on both sides.
12. Worked on both faces. Cutting edge on one side only.
23. Flint. Found in a hole cut in the rock floor at E in the semicircular niche of the apsidal building. It was with No. 29, which lay below it in the hole.
24. Calcedonic silica.
25. Calcedonic silica.
- 25A. Calcedonic silica, white and decomposed.

These last three are probably imported and may be modern. Their general appearance suggests that they are part of flint and steel apparatus for producing fire. The stone of which they are made is not found in the lower levels of the excavation. Throughout Malta flints for a fire-producing apparatus are often found now in the fields, sometimes on the surface, sometimes (as in the case of No. 25) driven down into the soil, probably by the action of the plough. Such flints are generally recognisable by the fact that there are no cutting edges, and by a characteristic semicircular hollow on one side, as if a piece had been bitten out, where it has been struck by the steel. Until the last fifty years or so, flint was imported into Malta from Sicily for fire-producing purposes, and the pieces were sold at a penny each. During the War, when there was a shortage of matches, these flints came into use again, and were sought for in the fields where they had been thrown away.

26. Cutting edge on each side of the upper part.

29. Found in the hole at E, lying under No. 23.

A small fragment of obsidian, probably part of an implement, was found at G, under a pavement. M. A. MURRAY.

America, Central: Chronology.

Long.

Maya High Numbers. By Richard C. E. Long.

39

The majority of Maya numbers do not rise above the cycle (144,000 days), and are consequently composed of not more than five periods. It has been established that in the Dresden Codex there are numbers of six periods, that is, they rise to a "great cycle" of 20 cycles. As to the inscriptions, there is a difference of opinion among students, some maintaining with Mr. Goodman that the next period above the cycle consisted of 13 cycles with apparently no higher period, while others hold that the inscriptions follow a similar system to the Dresden Codex and that if there were higher periods than the great cycle each of these was 20 times the next lowest one. I think that Mr. Morley ("An Introduction to the Study of the Maya Hieroglyphs," p. 115) has proved that the latter view is correct. He gives a numeral series of six periods from Stela N. Copan, another of seven periods from the Temple of Inscriptions at Palenque, and another of eight periods from Stela 10 Tikal. At the same time he points out that no calendric checks can be applied to his reading of these glyphs.

The present paper is intended to show that other instances occur in the Maya inscriptions of numbers above the cycle and also that some calendric checks can be found. In this paper Mr. Morley's terms—great cycle (20 cycles), great-great cycle (400 cycles), and great-great-great cycle (8000 cycles)—are used. The usual method of writing the Maya periods is also followed, except that for clearness a comma is put between the fifth period (cycle) and the sixth period (great cycle). Theoretically, of course, a comma would also be inserted between the tenth period, if there was one, and the eleventh, and so on for every fifth ascending period; but no numbers have been found consisting of more than eight periods. The usual method of denoting the position of glyphs in the inscriptions by capital letters for the vertical columns, and numerals for the horizontal lines, in which the glyphs occur is also adopted, and the practice of enclosing in brackets in the transcript of inscriptions those parts which are only obtained by calculation or inference, and do not occur or are illegible in the inscription.

Taking up first the Temple of Inscriptions at Palenque (*Maudslayi*, Vol. IV, Plates 60, 61, 62) it has been shown by others that this inscription commences with the initial series 9-4-0-0-0 13 Ahau 18 Yax and then gives the ending dates of each successive katun up to (9-13-0-0-0) 8 Ahau 8 Uo on C. 1 D. 1 (Plate 62). This last is properly only a "calendar round" date as it is not absolutely fixed in the Long Count, and the same remark applies to some of the intermediate katuns;

but as others are fixed by period endings there is no reasonable doubt that the whole form a consecutive series of katun endings. At this point, which probably is the last "historical" date in the inscription and also its contemporaneous date, the reckoning had reached what was a definite epoch in the Maya calendar, namely, 13 katuns from the commencement of the cycle. The next date is 7 Ahau 18 Zip on C. 7 D. 7. This also is only a calendar round date, but no doubt Mr. Goodman's opinion that it is (10-0-0-0-0) 7 Ahau 18 Zip is correct as it seems likely that, having reached 13 katuns from the commencement of cycle 9, the inscription next took a leap into the future and stated the end of cycle 10.

So far I have followed the work of others, but I have now a new suggestion to make, namely, that the glyph C. 12 is to be read as one great cycle. Comparison with Mr. Morley's figures show it is exactly his "normal" form of the great cycle glyph and it has the usual dot for one at the left. Now, if this number which is 1,0-0-0-0-0 is treated by a method I have given (MAN, 1919, 20) and counted backwards from 10 Ahau 13 Yaxkin which occurs on C. 11 D. 11 it reaches 4 Ahau 8 Cumhu, the "normal date." This is a notable result and proves the correctness of Mr. Morley's value for this glyph as it supplies the calendric check which his argument stood in need of. The whole date is to be taken as a period ending date, 10 Ahau 13 Yaxkin (ending) one great cycle. It is parallel with many period-ending dates in which the ending sign is omitted. It is also quite consistent with the context in the inscription as we may suppose that the author of it first reckoned into the future to the end of cycle 10, which was the next cycle ending after the contemporaneous date, and then to the next great cycle ending, taking larger and larger leaps forward each time.

New light can also be thrown on the part of the inscription immediately following. The date 5 Lamat 1 Mol occurs three times, namely, on E. 6 F. 6, H. 6 G. 7, and H. 10. It is accepted that the distance number on E. 1 F. 1 which is 12-9-8 (if the uinal number is correctly read as 9) connects 8 Ahau 13 Pop on E. 3 F. 3 with 5 Lamat 1 Mol on E. 6 F. 6. and that 2-4-8 on E. 7 F. 7 (counted backwards) connects the last-named with 3 Ahau 3 Zodz on E. 8 F. 8 and that 10-11-10-5-8 on G. 4 H. 4-G. 5 H. 5 connects the same 8 Ahau 13 Pop with 5 Lamat 1 Mol on H. 6 G. 7. Clearly these two dates 5 Lamat 1 Mol cannot denote the same point of time as their respective distances from 8 Ahau 13 Pop are different. The third occurrence of 5 Lamat 1 Mol, that on H. 10, may be connected by the distance number 8 on G. 8 with 10 Ahau 13 Yaxkin on G. 9 H. 9. This last 5 Lamat 1 Mol might, of course, be the same as either of the two former ones or might differ from both, but the probability would be that it is the same as that on H. 6 G. 7, which is nearest to it in the inscription. So far we are dealing with admitted results, but now I make a new suggestion, namely, that H. 7 should be read as one great cycle. This will be found to clear up the reading of the inscription in a remarkable manner. It should first be mentioned that the initial series value of 8 Ahau 13 Pop appears to be 9-8-9-13-0, since that is the initial series of House C. of the Palace at Palenque (*Maudslayi*, Vol. IV, Plate 23, A. 1-B.4). That inscription has a distance number (B. 5a) of 12-9-8 connecting the initial series date with (9-9-2-4-8 5 Lamat) 1 Mol on B. 5 b which confirms Mr. Goodman's view that the distance number on E. 1 F. 1 of the Temple of Inscriptions is also to be read 12-9-8. That being so the initial series value of the date 5 Lamat 1 Mol on E. 6 F. 6 is also 9-9-2-4-8.

Now, if to the initial series value of 8 Ahau 13 Pop on E. 3 F. 3 9-8-9-13-0
we add the distance number on G. 4 H. 4-G. 5 H. 5 - - - 10-11-10-5-8

we reach as initial series value of 5 Lamat 1 Mol on H. 6 G. 7 - 1,-0-0-0-0-8

And we find on the inscription this very number of one great cycle and eight kins (1,-0-0-0-0-8) on H. 7 G. 8. The only unusual feature is that the intermediate

periods between the great cycle and the kin are omitted. But some other instances are known of the omission of periods and they are probably omitted here on account of the space this number would occupy if written at length. The (1,-0-0-0-0-8) 5 Lamat 1 Mol may be taken as a period ending date (or as a series connecting with 4 Ahau 8 Cumhu, which comes to the same thing). The last 5 Lamat 1 Mol (on H. 10) no doubt also has the same initial series value of 1,-0-0-0-0-8 because it immediately follows 10 Ahau 13 Yaxkin on G. 9 H. 9 which should be taken to be a repetition of 1,-0-0-0-0-0 10 Ahau 13 Yaxkin on C. 11 D. 11 already dealt with.

Before leaving this inscription a further new reading must be mentioned, namely, the number on F. 9 to E. 12, which Mr. Morley reads as 7-18,-2-9-1-12-1. This does not connect any dates in the text, but I propose to correct it by supposing that the tun number should be 2 instead of 1, a correction only involving the addition of a single dot to the numeral. Whenever errors have been proved to occur in the inscriptions they are usually of this very kind, the omission of one dot. Making this correction we have 7-18,-2-9-2-12-1, and this connects 1 Manik 10 Tzec on H. 1 G. 2 (the next following date) with 5 Lamat 1 Mol. Which of the dates 5 Lamat 1 Mol in the inscription is meant I do not venture to say, but it is very noteworthy that a correction of one dot connects the date next after this long number with the calendar round date which is most prominent in the inscription, and this result makes it practically certain that the proposed reading is correct.

Turning now to Stela C. Copan (*Maudslay*, Vol. I, Plate 41), one of the most baffling of the Maya inscriptions, there is on A. 1 B. 1 an introducing glyph, but this is not followed as usual by an initial series. Instead there is on A. 2 a glyph with the numeral 13 which has been by some read as 13 cycles, and there is no further numeral series. This reading will not connect with any other date, and the glyph differs from the usual cycle glyph in having a hand and staff over it. But it is exactly the same as Mr. Morley's head variant of the great-great cycle glyph, that is, it would read 13-0,-0-0-0-0-0, and if the latter number is counted backwards from the next following date 6 Ahau 18 Kayab on B. 2 A. 3 it reaches 6 Ahau 8 Uo, which does not occur in the inscription but there is a 5 Ahau 8 Uo on C. 11 D. 11 so that the addition of one dot in the latter date would make a connection. The date 6 Ahau 18 Kayab (probably the same point of time) occurs again on B. 7 A. 8 and is connected by the distance number 11-14-5-1-0 on A. 5 B. 5-A. 6 B. 6 with 6 Ahau (corrected from 8 Ahau in Maudslay's figure by Mr. Bowditch in *The Numeration, Calendar System and Astronomical Knowledge of the Mayas*, p. 195), 13 Muan on A. 9 B. 9.

The opposite side of the Stela also begins on C. 1 D. 1 with an introducing glyph followed on C. 2 by a glyph which I also propose to read as 13-0,-0-0-0-0-0, as it is very similar to the other one. This is followed on D. 2 C. 3 by 15 Ahau 8 Cumhu, an impossible date as 15 cannot occur as a day number. There is nothing in the inscription to show what the correct day number should be. If it is corrected to 4 the date would be 4 Ahau 8 Cumhu the "normal date," and counting back 13-0,-0-0-0-0-0 from 4 Ahau 8 Cumhu reaches 4 Ahau 18 Uo which apparently occurs on C. 7 D. 7.

There is a certain consistency in the above interpretation as it makes each side of the stela begin with a reckoning of 13 great-great cycles and the respective zero points of these reckonings (6 Ahau 8 Uo and 4 Ahau 18 Uo) occur on one side.

Lastly, I hazard a very doubtful suggestion as to the inscription on the base of Stela N. Copan (*Maudslay*, Vol. I, Plate 83). In this instance I use Maudslay's notation to distinguish the position of the glyphs. Glyph 22 may be three great cycles that is, 3,-0-0-0-0-0 which number reckoned backwards from 11 Ahau

13 Pop (glyphs 15-16) would reach 6 Ahau 13 Muan, a date which does not occur in this inscription, but is found as above-mentioned on Stela C.

On Maudslay's map Stela N. is at the south side of the Great Plaza and Stela C. is nearly opposite it near the north side of the same plaza. The date of Stela N. is fixed by the initial series on its east side as 9-16-10-0-0. Dr. Spinden in his table of the monuments at Copan ("A Study of Maya Art," Vol. VI of *Memoirs of the Peabody Museum*. Cambridge, Mass., p. 164) gives Stela C. (although undated) next after 9-16-15-0-0 and before 9-17-5-0-0. His method of dating in this table is based on the style of art and it is noteworthy that he should put Stela C. and Stela N. near in date as they are in situation. It might then be the case that the dates on one would have reference to those on the other, as in the above suggestion.

RICHARD C. E. LONG.

Balkan Peninsula: Technology.

Durham.

Some Balkan Embroidery Patterns. By M. Edith Durham.

In the districts with which I am dealing we find, roughly speaking, two types of pattern. Those which are worked in cross stitch and are therefore, necessarily angular, and those worked either in chain stitch or formed by stitching down silk or gold cord in curved and flowing lines. The former are, as a rule, worked by the Slav-speaking people and the latter by the Albanians. When the curvilinear pattern is found, for example, in Montenegro, it is always the work of Albanian tailors.

Up till very recent days, embroidery was used lavishly on the costumes of both men and women. It served for use as well as for ornament, for it was almost

always placed on parts of the garment which required strengthening. The material embroidered was hand-woven and, therefore, narrow, and the many seams thus made necessary were strengthened by broad bands of stitchery. The cuff, the neck, the pocket holes, the edges of garments, and even elbows were thus reinforced.



FIG. 2.
MONTENEGRIN OSHVITZA.
KRSTATZ. $\frac{1}{2}$ NAT. SIZE.

To take cross stitch first. Throughout Bosnia, the Herzegovina, Montenegro and the Slav-speaking districts of Macedonia, we find both men and women wore, till very lately, "jumper"-shaped shirts of hand-woven cotton with wide sleeves. The garment is put on over the head. The "pull" on the neck opening would cause it easily to tear. It is, therefore, always embroidered. In Montenegro this takes the form of "oshvitza" strips worked in cross stitch sewn into the garment. They were worked always in dull red, blue, green and black; sometimes relieved with a few stitches of gold. The colours were home-dyed, but "penny packets" of bad dyes were beginning to come in from abroad.

Oshvitzas were worked by the peasant girls and brought in for sale at the market. There was a great variety of pattern, and the patterns were traditional, copied from one to another without preliminary marking out. Most patterns had names, some of which I obtained; but, unfortunately, I have not preserved them all. Two figured here are Kukatcha (Fig. 1) and Krstatz (Fig. 2).

Kukatcha means scorpion fly. The scorpion flies belong to the genus *Panorpa* and are characterised by the fact that the last segments of the tail can be flexed scorpion-wise. Also the head is prolonged into a beak. The pattern appears to



FIG. 1.
MONTENEGRIN OSHVITZA.
KUKATCHA. $\frac{1}{2}$ NAT. SIZE.



FIG. 3
MONTENEGRIN OSHVITZA.
 $\frac{1}{2}$ NAT. SIZE.

represent a fly with bent tail



FIG. 4.
MONTENEGRIN OSHVITZA.
 $\frac{1}{2}$ NAT. SIZE.

The Little Pear pattern I have already figured in MAN, 1923, 21. Of the many other nameless "Oshvitza" designs which I possess I give two good ones (Figs. 3 and 4). They, also, may be plant forms. The work is usually minute, one



FIG. 5.—BIRD AND SERPENT DESIGN FROM CLOAK OF SCUTARENE CATHOLIC MARRIED WOMEN. IN ALL THREE VARIANTS A SIMILAR PLANT APPEARS, WITH FLOWERS AND LEAVES, AND THE LONG CURVED FEATHER (?) OR EAR OF CORN (?). $\frac{1}{2}$ NAT. SIZE.

thread only of the material being taken up. Some, especially the Macedonian, work is so fine that it is a wonder the human eye can stand the strain, especially when subjected daily to pungent wood smoke. Against this must be balanced the fact that these women cannot read or write, and never work by artificial light. Cross stitch and weaving are women's work.

When we come to the curvilinear patterns of Albania we find that all the finer work both for men's and women's garments is done by men, especially when the work is on cloth or velvet, and the embroidery in gold. These are the garments of town dwellers. The mountain peasant wears thick white woollen garments, heavily embroidered with black braid, plaited by the women from the wool of black sheep, which are highly esteemed. Each district has a different pattern. An expert could tell a man's tribe by his patterned clothing.

These patterns, too, are traditional. A strange one, for which I have vainly tried to get an explanation, is the Bird and Serpent pattern, which, in one form or

and sting, the group of three alternating stitches on the top being wings. Krstatz is even more stylised. The name was given me as that of a plant. The dictionary gives "four-leaved herb Paris (*Paris quatrifolia*). This has four leaves with a berry in the centre. Whether the cross in the pattern with gold stitches in the centre represent this in stylised form I leave to the reader to determine. The rest of the pattern seems plant-like.

thread only of the material being taken up. Some, especially the Macedonian, work is so fine that it is a wonder the human eye can stand the strain, especially when subjected daily to pungent wood smoke. Against this must be balanced the fact that these women cannot read or write, and never work by artificial light. Cross stitch and weaving are women's work.

When we come to the curvilinear patterns of Albania we find that all the finer work both for men's and women's garments

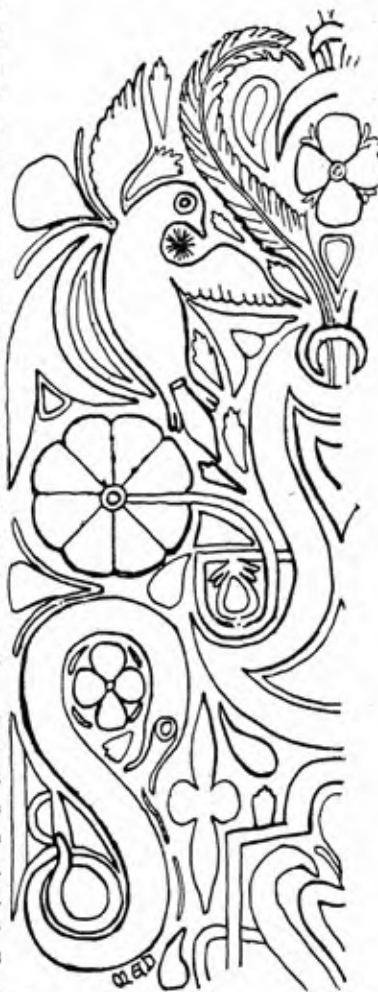


FIG. 6.—BIRD AND SERPENT DESIGN.
 $\frac{1}{2}$ NAT. SIZE.

another, is invariably worked upon the out-door cloak of the Catholic women of Scutari. The cloak is given as a wedding gift by the bridegroom to his bride. The tailors can only say, "There must be a story about it, which we have forgotten."

I give three variants (Figs. 5-7). They are all solidly worked in silk chain-stitch in many colours, upon cloth, and produce a very rich effect.

In chain and running stitch in silk upon cotton is a fine procession of boldly stylised Cocks (Fig. 8), which I obtained from an Albanian who brought it from Kosovo district. It is recent work, as the silks are foreign-dyed. Another amusing design from the same district is the Return of the Dove to the Ark (Fig. 9).

This, too, is in chain and running stitch in silk. Both this and the Cock are so well worked as to be the same on both sides of the material. Both designs form the ends of maramas, the



FIG. 7.—BIRD AND SERPENT DESIGN.
SCUTARENE WOMAN'S CLOAK.
 $\frac{1}{2}$ NAT. SIZE.

decorated towels so popular in the East.

The Ark seems to be based on the galleys that formerly plied in the Adriatic and Aegean in the Middle Ages. The curious running pattern below looks as though it must mean something. Is it the dove highly conventionalised?

The superiority of the Albanian as a designer is marked. He is the artist of the Balkans. His curvilinear patterns run through the inlaid metal work and carving,

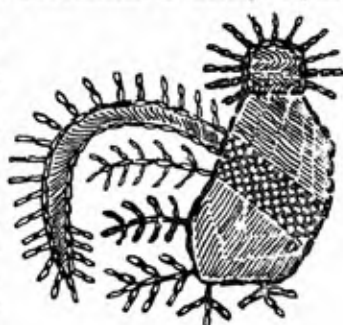


FIG. 8.—THE COCK. COLOURED SILK AND GOLD THREAD ON LOOSE COTTON MATERIAL. FROM KOSOVO VILAYET. $\frac{1}{2}$ NAT. SIZE.

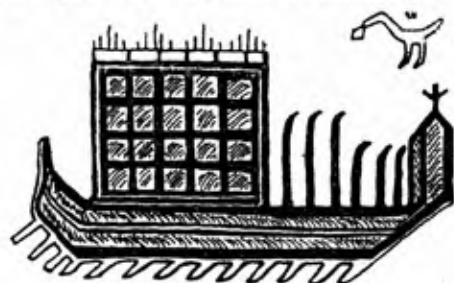


FIG. 9.—THE RETURN OF THE DOVE TO THE ARK. GREEN SILK AND GOLD THREAD, DOVE AND BORDER DULL PINK, ON LOOSE COTTON MATERIAL. KOSOVO VILAYET. $\frac{1}{2}$ NAT. SIZE.

which is now fast dying out. He is usually the silver-smith, and the ornaments which he still makes in very rough form for present wear often are surprisingly like those found at Glasinatz. Little doves, pierced to wear as amulets, are among the Glasinatz finds. The story of the birds on the Scutari cloaks may, indeed, be so old as to excuse the tailors for having forgotten it.

M. EDITH DURHAM.

Papua: Religion.

Lyons.

Tree Reverence amongst Papuans. *By A. P. Lyons.*

41

Many races, at some period of their development, have regarded trees of a special genus as the home or haunt of spirits, so that they came to be approached with reverence or fear.

Amongst most of the less advanced and least known races of to-day, it is probable that this form of culture is still to be found, though, so far, the extent of its distribution is not known. The following information in regard to some Papuans of New Guinea, therefore, may be of assistance.

The origin myth of a number of tribes who are located between the Anglo-Dutch territorial boundary of New Guinea, and the Wassi-kussa river to the East, concerns a man variously known by the names Guba, Wiabu and Baia, as well as by others. Guba came out of the ground near the foot of a Tchbem tree, which is a species of fig. In the branches of this tree he made a home, after which he returned into the earth and brought his wife and child to the surface. They resided in the arboreal home, where more children were born to Guba. Finally evil beings who were capable of transforming themselves into snakes, birds, etc., caused disaster, by flood in some accounts, through fire in others, to befall Guba and his people, many of whom perished in the branches of the Tchbem tree. Guba and a few others escaped, and thereafter lived on the surface of the earth. At last Guba climbed the Tchbem tree and departed for Jaba, which is the land of spirits. On this account, Tchbem trees were ever afterwards revered and, because they are thought to be the haunts of the spirits of those who were destroyed in the time of Guba, as well as of others who have subsequently died, these trees are feared. Neither the corpse of a deceased tribesman, nor any part of it, is placed in the branches of a tree.

A few miles eastward of the Wassi-kussa river, we reach the Pahoturi river and the Bina tribe, which is mainly Kiwai in origin and language. This tribe holds the Dani tree, a species of fig, in awe, because it is believed to be the haunt of the spirits (Oboro) of departed tribesmen, as well as the dwelling-place of other supernatural beings and monsters. In the branches of Dani trees, these people, of old, deposited the skulls of their dead. On this account, they reverence this particular tree.

The women of this tribe make special skirts out of material obtained from the branch shoots of the Dani tree. Probably this is because they may vaguely believe that the Dani tree contains soul essence of some departed kinsman, which might induce fecundity.

Fear and reverence for the Dani tree, and for practically the same reasons as with the Bina, are to be found amongst the other Kiwai-speaking peoples, as well as amongst the Dibiri (Bamu river) tribes, although the Wabuda Island (Fly river) natives disclaim ever having disposed of skulls of deceased relatives in the branches of trees. I have some reasons for doubting this statement, however.

Tree sepulchres have long fallen into disuse amongst the Bina and other Kiwai-speaking tribes, but, up to quite recent years, the Dibiri peoples disposed of the skulls of their dead in the branches of Taradi (Dani) trees. The Bamu river natives are very reticent in affording full information about their burial customs and, although I was aware that some of them continued to place skulls in the branches

of Taradi trees, it was not until the year 1920 that I was privileged to see one of their tree sepulchres. It was an old Taradi tree that was in decay. I saw several very old skulls in its branches and in cavities formed by the grafting of two or more aerial roots. Some of these skulls were almost completely encased in the branch shoots.

None of the tribes mentioned above will destroy the particular fig tree they reverence and fear, and it is a common sight, when visiting them, to see majestic fig trees standing alone on areas of forest land that have been cleared for garden and other purposes.

Beyond the Bamu river, I cannot give accurate information concerning tree reverence and fear, but, on the authority of the Rev. B. Danks in his paper "Some Notes on Savage Life in New Britain," which was read at the twelfth meeting of the Australasian Association for the Advancement of Science, and published in its report, pages 452 and 453, the Banyan tree is an object of special reverence and fear in New Britain.

A. P. LYONS.

Obituary.

Macalister.

Edmund C. R. Armstrong. *By Prof. R. A. S. Macalister, Litt.D., LL.D., F.S.A.* 42

To his many friends, the news of the death of Mr. E. C. R. Armstrong, on the 29th March last, after a brief illness, came as a most painful surprise.

Edmund Clarence Richard Armstrong was born in Dublin in the year 1879, the son of Captain A. C. Armstrong of the 2nd Queen's and 3rd Battalion Leinster Regiment, and grandson of Sir Andrew Armstrong, Bart., of Gallen Priory, King's County. He inherited landed property in Counties Galway and Limerick, which, however, was sold under the Wyndham Act of 1903.

Mr. Armstrong was for some time, during the early part of his career, engaged in commercial pursuits; and the training which he thus received served him in good stead when he found himself in control of the great collection of Irish antiquities housed in the National Museum of Dublin. His orderly habit of mind is well reflected in the admirable arrangement of the collection. When the health of the late Mr. George Coffey, the former keeper, began to fail, at about the beginning of the present century, it was necessary to appoint a temporary assistant, and Mr. Armstrong was successful in his candidature for this office. The assistantship was made permanent when, in 1907, it became clear that there was no hope of Mr. Coffey's recovery; and when the keepership fell vacant, in 1914, Mr. Armstrong succeeded as a matter of course.

The choice of Mr. Armstrong was most fortunate for the collection. For, in addition to his love of order, to which allusion has already been made, he possessed a wide knowledge of archæology and an extensive acquaintance with its literature. He was gifted with a remarkably retentive memory, and possessed an enviable power of rapidly assimilating the contents of a book, even when it was written in one of the less familiar Continental languages. His studies were by no means confined to archæological writings: he was well read in French, German, Spanish, Italian, Swedish, and Irish literature.

His special archæological interests were equally catholic, as befitted the custodian of a collection of antiquities that ranges from the Stone Age to traders' tokens of the eighteenth century. His only book is a monograph on Irish seals; but among his numerous papers, published by the Royal Irish Academy, the Royal Society of Antiquaries of Ireland, and the Society of Antiquaries of London, are descriptions of Stone Age remains of various kinds; Bronze Age finds; specimens of La Tène art (a recently published paper on La Tène work in Ireland is the most

complete account of the remains of that obscure period in Irish history); works of Celtic Christian art; and contributions to heraldic and other mediæval studies. But the arrangement of the collection under his charge would in itself be a sufficient monument, having regard to the extreme difficulty of any kind of orderly arrangement in that most inconvenient of buildings, the Dublin National Museum. His last work, prepared before his departure from Dublin, and not yet published, will be found to be an extremely important and thorough study of the typology of the Irish ornamental bronze pins of the seventh and succeeding centuries A.D.

In addition to his work at the Museum, Mr. Armstrong served on the council of the Royal Irish Academy; he was also Hon. General Secretary and, afterwards, a Vice-President of the Royal Society of Antiquaries of Ireland, and Irish correspondent of the London Society of Antiquaries. He filled the office of Margaret Stokes Lecturer in Celtic Art and Archæology at Alexandra College, Dublin, in 1921, and in 1922 was extern examiner in Archæology for the National University of Ireland. He had also taken part in some important excavations in Ireland.

At the end of 1922, to the great regret of his Dublin colleagues and fellow-workers, Mr. Armstrong took advantage of the privileges accorded to Civil Servants on the change of Government, and retired from the keepership of the Irish Antiquities on a pension, leaving Dublin to settle in London. Shortly afterwards his appointment as Bluemantle Pursuivant of Arms at the College of Heralds, in succession to the Hon. Philip Plantagenet Cary, was gazetted: a post which would have been in the highest degree congenial to one with the interest and knowledge which he possessed in heraldry and kindred subjects. But a short three weeks later he was called away.

Mr. Armstrong married Mary Frances, second daughter of the late Sir Francis Cruise, M.D., of Dublin, who, with their two sons and one daughter, survives him.

R. A. S. M.

REVIEWS.

Europe: Archæology.

Peake.

The Bronze Age and the Celtic World. By Harold Peake, F.S.A. London: Benn Brothers, 1922. 4to. Pp. xii+202. Pl. xiv and figures in text. Price 42s. **43**

This is not an easy book to review. It covers much ground, and its object is to bring together the conclusions of many different kinds of research; to correlate these results, supplementing the negative conclusions, for example, of the philologists by archæological facts which cannot be ignored, however disconcerting they may be to the defenders of current doctrine; and to present in broad outline the course of events during a long period, and over a wide range of country. "Our purpose in this work is not so much to record evidence, as to interpret it; to restore the main features of early history, than to describe archæological remains" (p. 103). To do justice to its good points would require the co-operation of a college of specialists; to revise, correct, and supplement its statements on matters of controversy would need a volume of footnotes considerably larger than the text.

To begin with, it must be remembered throughout that it reproduces without much expansion the substance of a single course of lectures delivered only last year, on the morrow of a profound dislocation of the ordinary facilities for correspondence and even for research in libraries and museums. Omissions, even of some important topics, were unavoidable, perhaps even desirable, if the main argument was not to be confused by cross-reference and digression. At all events, Mr. Peake has succeeded in making plain what he is trying to say; and he has been frank throughout as to his own limitations, and as to the need for caution and suspension of judgment. The book must be judged as presenting in broad outline the conclusions of an

observant and, on the whole, well-informed enquirer, conscious of the drawbacks which beset his predecessors, as well as of their merits and positive contributions; willing, too, like the Father of History, "himself to express an opinion about things "not clearly seen," to use (that is) imagination as an instrument of research, and a challenge to the laborious compiler of things clearly enough seen but not in their wider bearings.

Naturally, distinction must be made between those parts of the book which may claim to be "contributions to knowledge" and those which are at best "new views" of the bearing of admitted facts. Central, in the volume, as in the argument, is an analysis of the varying forms of the hilts of those leaf-shaped swords which characterise the later stages of the European Bronze Age. Previous writers have done what was possible, with scattered and inadequate material, to classify the blades of these swords; but the series is a difficult one: times were changing and there was a good deal of conscious experiment, as the notion of a slashing-weapon overgrew the earlier conception of a stabbing-dagger or rapier. By careful study of the hilts, however, which he has shown to have developed in a much simpler and instinctive fashion, less at the whim of the warrior-user than as the response of the traditionally trained craftsman to the general necessities of the new hand-grip on the weapon as a whole, Mr. Peake has succeeded in establishing, first, a strong case for a sequence of types, morphologically connected with each other; and then a corroborative argument for this sequence, as well as time-limits for the whole course of development, by his survey of the regional distribution of each variety. As these distributions are sufficiently varied, and cohere sufficiently well with the morphological changes among the weapons themselves, he is in a strong position for interpreting these leaf-shaped swords as the weapons of definite groups of aggressive and migratory folk, during the troubled period from the fifteenth to the ninth century B.C. His transitional "Type A" would appear to belong to the period of the Fall of Knossos, and the transition from the phase of Aegean civilisation known as Late Minoan II. to the widespread and relatively decadent culture known as Late Minoan III. His "Type G," the fully formed "Hallstatt sword" of Central and Western Europe, was already fairly well dated to the tenth and early ninth centuries; and midway in his series, Types D and E are securely assigned to the period of the great "Sea Raids" of the late twelfth and early thirteenth centuries by the occurrence of examples of them in Egypt, one of which has engraved upon its blade the name of Seti II., whose short reign falls precisely from 1209 to 1204 B.C.

Round this central and most important discovery the rest of the book is grouped by way of commentary on its implications. First of all, what was the ancient world like before this first of conquering weapons came into being? Who wielded the leaf-shaped sword? Where and how was it invented? What other elements of civilisation may be associated with it? What superior weapon or superior folk eventually defeated it and its users?

The answer to the first of these questions occupies the first five chapters. They are as short and clear a summary of recent opinion about early civilisation in Europe as can be found in similar compass: supplemented by some ingenious suggestions at the points of most perplexity, and by a detailed exposition of what may be called the "prospector" theory of early commercial intercourse. This must be received with caution, for there are weak links in the chain. Siret's derivation of the culture of El Argar from that of the "Second City" at Hissarlik, if valid at all, can only be true in the most general typological sense. Breasted's attribution of the first silver working to Cilicia rests on no direct evidence: for his purpose, Cilicia is as good a general name for regions north of Syria, as Taurus or Commagene; but in Mr. Peake's context Cilicia suggests a maritime source which is not demonstrable yet. Petrie's conjecture of a Transylvanian origin for some early Egyptian gold hardly bears the

superstructure here imposed on it. Mr. Peake's analysis of the early dagger series seems to start with Cretan forms which are derivative (unless he can show that Crete produced its own copper), and he hardly appreciates the concordance of the daggers of Egypt, Syria, Cyprus and Hissarlik, as evidence of a more easterly origin. Though Perry's maps of early distribution are justly criticised (p. 48), his conclusions as to early intercourse are accepted as "substantially true"; so were Fluellen's observations on the rivers of Monmouth and Macedon, but they proved either nothing, look you, or too much. We should like to know the evidence for "Phœnician merchants" at Tarentum, and for megalith-culture at Syracuse (p. 53); for a deposit of "silt" in the ruins at Hal-Tarxien (p. 52); for the correlation of early Maltese culture with Orsi's "Siculan I." (p. 54); for "dolmenic" features in Etruscan tombs, or in the rock-hewn chamber-tombs of Asia Minor (pp. 58-59). "It is a far cry from Etruria to Sumer" (p. 59), but the distance is not shortened by bringing "prospectors" round by Boghazkeui; or by substituting the "Persian Gulf" for Sumeria. If "prospectors" were polyglot folk (p. 60), the case for philological comparisons would seem to disappear; and what evidence is there that they were not also polytheists?

In discussing next what he calls the "Celtic Cradle," Mr. Peake has some interesting generalisations about the part played by the brachycephalous "Alpine" types in universal history; but is it really true that "Soviet Russia is mainly 'Alpine'?" The hypothesis that the glacial sands and gravels west of Lemberg "must have carried an open heath vegetation" (p. 64), and therefore must have been always passable for hunters and nomads, does not quite take account of the occurrence of forest on such subsoils elsewhere: the determining factor, as on the Roumanian and Bessarabian loess, is moisture, not geological character. The name "Tripolje" is applied quite vaguely to all cultures between Dnieper and Ægean which have painted pottery, and there is mention of "Tripolje" pottery on sites in N.W. Asia Minor and in Serbia. There are grave difficulties in accepting the affiliation of these painted fabrics to Minoan Crete (p. 65), as was originally proposed by von Stern; and these are not diminished by the attribution of them (p. 66) to the "Beakerfolk," especially if by the "Beakerfolk" is meant a "stable cross" between the types of man represented respectively at Ofnet and at Combe-Capelle. Can we strictly describe as a "Beakerfolk" what must be *diablement changé en route* before it begins to make beakers? On the other hand (p. 73), Mr. Peake seems to confuse the arrival of "Tripolje-culture" in Thessaly (*which* arrival of trans-Danubian painted-pot tradition does he mean?) with the exodus of "Kurganfolk" from east of the Dnieper. The derivation of the "bell beaker" from the silver vessels of Hissarlik II. (p. 78) raises more questions than it answers; for if the vessels of Hissarlik are primary, the mid-European "bell beaker" series must be read from east to west, instead of from west to east, which is not only the morphological but also the stratigraphical direction.

All this section would have been clearer if Mr. Peake had seen his way to incorporate more material from his own recent papers in the *Journal of the Royal Anthropological Institute*. So much is taken for granted, or relegated to footnote references, that to readers unacquainted with those papers the argument must be difficult to follow.

On the "leaf-shaped" swords themselves this condensation is less felt; but it is a pity that it is not more clearly explained how "Type A" itself came into existence. Mr. Peake's theory that the swords with flat (and eventually flanged) tangs were "plebeian" is ingenious, but does not explain how these "plebeian" swords are related to the flat-tanged rapiers of the Shaftgraves at Mycenæ, or to the flat-tanged daggers of Cyprus and the cemeteries about Carchemish. The history of Ægean sword-types is not clearly stated, and on p. 77 it looks as if Mr. Peake

thought that the blades with concave cross-section were late. They go back, however, in Egypt to pre-dynastic times, and to the earliest metalliferous tombs in Cyprus. Naue made a good analysis of the Ægean and Oriental material available when he wrote, and in essentials his explanation of the Ægean rapiers stands. There is, in fact, a real gap between the late Ægean blades and the earliest of the "leaf-shaped" series.

What is no less serious is the omission of the early iron swords of Greece and the Levant, which have hilts not of types analogous to Mr. Peake's "F" and "G," as his Hungarian evidence would suggest as probable, but to Types B and C. How did these early types reach Halos, Attica, and Cyprus? How did an even earlier-looking type, hardly flanged at all, reach Carchemish (Woolley, *Liv. Annals*, VII, Pl. XXV k.)? And how do the objects associated with these weapons—the fibulæ at Halos, for example, or at Amathus—fit Mr. Peake's chronology? The movements to and fro between Koban and Hungary, postulated by Mr. Peake, are difficult enough to explain by themselves, but, unless they can explain these outstanding facts, they may have to be revised. An attempt was made some years ago, in a paper on the *Sigynnæ* of Herodotus (in "Anthropological Essays offered to Sir Edward Tylor"), to deal with the Levantine iron-work in another way, but Mr. Peake does not seem to have seen it. And what, if the Podolian sword belonged to an Argonaut?

The chapter on "Greek lands" does not add much to the argument, and the chronological scheme really belongs to that on the "Leaf-shaped Swords," for the proof is archæological, from the inscription of Seti II., not from Greek folk-memory. It prepares the way for the discussion of philological anomalies in the Greek evidence, and for the Ægean sections of the concluding chapters XIV. and XV.; but it is not quite abreast of the evidence. The skulls at Agios Nikolaos in eastern Crete do not bear out the conclusion as to brachycephalic visitors to Crete; nor is it yet safe to say that on the Minoan mainland "the rulers were in all cases prospectors" (p. 109): dishonesty, surely, is not so confined to "prospectors" as to demonstrate the physique of Laomedon, as seems to be implied on p. 111. To take the "Shekelesh" people as "prospectors from the west Mediterranean" is surely to invert the course of the Sea Raids, as well as to throw up the view that the "prospectors" were men of peaceful subtlety, numerically negligible.

The violence of the replacement of bronze swords by iron ones has been a little exaggerated; or, rather, the case for inferring a violent break is not stated conclusively here. In the West, no doubt, there was wholesale displacement, and pursuit of the bronze-sword folk by newcomers; but what about Hallstatt itself, where the development of type seems to be unbroken?

We now come to the other half of the book, which restates the argument for an Aryan "home" in the Russian steppe (with some stimulating criticism of Giles's Hungarian theory) and for identification of the Q-Celts with the users of "leaf-shaped" swords and of the P-Celts with the iron-sword people. The objections based on anomalies in distribution are discreetly handled, and the analogous evidence in the Italian peninsula is presented as plausibly as the very small number of Italian swords allows. To be really cogent, this argument needs to be reinforced by much more extensive comparison of archæological material from the Hallstatt culture with data from peninsular Italy. We should have expected some reference, for instance, to Grenier's work on Bologna.

This is only one example of a defect which Mr. Peake's own candour makes it easy to illustrate. What are we to think of a "Bibliography" which omits so many of the more useful, and even of the more important, books? which has no place for Pigorini, Colini, Schlitz, Hubert Schmidt, Heierli, Feist, Hirt, Deecke-Belck, Wilke, Ratzel Kretschmer, Edward Hahn, Jullian? Which has room for "Anticipations"

and "Tono Bungay," and omits Sir Arthur Evans? The explanation seems to be that the list is really a guide to the footnotes; but does this mend matters?

In general, this is an eminently fair and thoughtful attempt to deal clearly and popularly with a very wide and complicated subject. It bears its limitations on its face, and has appeared at a moment when inquiry is unusually active in this field, and arrears of work are coming forward to publication rapidly. It will certainly lead to discussion, for it challenges review and revision at many points of its argument. For its main novelties, however, it will remain classical; to many readers it will be a revelation of what the scientific imagination may claim to discover in isolated facts marshalled according to their regional distribution, and compared in this distribution with other series as different in quality as some that are considered here; to fellow-workers it will recall material long set aside, inexplicable as yet, and will suggest fruitful bypaths for fresh exploration.

J. L. MYRES.

America: History.

Prescott.

The Conquest of Mexico. By W. H. Prescott. Illustrated by Keith Henderson with an introduction by T. A. Joyce. London (Chatto & Windus), 1922. 2 volumes. pp. vi + 480, 466. Price 2l. 2s. 44

The two features to be remarked in this edition of the *Conquest of Mexico* are the introduction by Captain T. A. Joyce and the illustrations by Mr. Keith Henderson. Captain Joyce is the most considerable English authority on Mexican archæology; he is also a master of style. His essay will be read for pleasure as well as for its information.

Mr. Keith Henderson's drawings are the result of intensive study of native craftsmanship and design, being in many cases directly based upon contemporary paintings by Mexican artists. Thus they form an invaluable aid to understanding the atmosphere in which the conquest took place. The illustrations of the Spaniards in the second volume emphasise the chivalrous side of the expedition. If the figures are a little less typical than those of the Indians, this is due to the lack of contemporary models rather than to any failure on Mr. Henderson's part.

This is the edition in which lovers of Prescott will in future wish to read their *History of the Conquest*. E. C. R. ARMSTRONG.

Prehistory.

Quennell.

Everyday Life in the New Stone, Bronze and Early Iron Ages. Written and illustrated by Marjorie and C. H. B. Quennell. B. T. Batsford, Ltd., 1922. Pp. x + 119, with maps, illustrations and index. Price 5s. net. 45

There has been growing up a great demand for works on Prehistoric times, especially among children, and, following this demand, a steady supply of volumes dealing with these periods. Among those intended for the young, the works of Mr. and Mrs. Quennell deservedly hold a high place, for these authors are not content to give a dry record of the discoveries of archæologists, but endeavour to reconstruct as vividly as possible the conditions of life in those far-off times.

This volume, which is the second of a new series, is perhaps not quite so successful as its predecessor. This is, to some extent, due to the fact that no important textbook on these periods has been published recently, while the views of various authorities on many important questions still differ. This has led our authors into making statements which are incompatible with one another and sometimes contradictory. For instance, it would be well not to state that the Eskimos are the successors of the Magdalenian artists, or that the Pilgrims' Way and Hill-top Camps are Neolithic—at least without some qualifying remarks. The authors,

following two interpretations of the same series of facts, have described two invasions of Britain by broad-headed men about the beginning of the Bronze Age, and still retain the obsolete term "Iberian" for the Mediterranean race. H. J. E. P.

Psycho-analysis.

Bradley.

Duality: a Study in the Psycho-Analysis of Race. By R. N. Bradley. London: George Routledge & Sons, Ltd., 1923. 18 x 12 cm., pp. xi + 186. Price, 6s. 6d. net.

46

Mr. Bradley has read some of the works of Sergi, Freud, Coué and Geley, and has also looked at Ripley's "Races of Europe," though he has not studied the maps. This reading has led him to formulate an hypothesis.

His thesis is that there are two sexes, male and female, the one intellectual and the other emotional; this duality leads to sex antagonism, which can be ended by love and marriage. Likewise there are two races in Europe: one short-headed, the other long-headed, which are likewise intellectual and emotional respectively. This has produced a race antagonism, which resulted in the late war. The cure, again, must be some form of love and marriage, though how the latter is to be achieved he does not tell us.

The theory is admirably evolved from the premises, and would be excellent were the latter correct. Unfortunately the "facts" on which the arguments rest turn out to be errors, such as the statements that the French are long-headed and that the Alpines, being a branch of the Mongol race, have smooth and hairless faces.

H. J. E. P.

Anthropology.

Klaatsch.

The Evolution and Progress of Mankind. Professor Hermann Klaatsch. Translated by Joseph McCabe. London: Unwin. pp. 216. 25s. net.

47

In this book Professor Heilbron has edited a series of popular lectures in which Professor Klaatsch set forth the results of his studies into the early history of mankind. The view is propounded that the different types of humanity had different progenitors, the common link being far further back in geologic time than has usually been considered probable. The apes, however, are not to be regarded as ancestral forms, but as degenerate cousins, whose ancestors had better skulls and a more man-like appearance.

The pre-human ancestor was able to develop into Man by avoidance of specialisation, a feature well illustrated by a study of the dentition. The author regards the Neanderthaloid type as akin to the gorilla, and considers this type remained backward in the state it had reached before the glacial epoch, being thus largely displaced by the progressive Aurignac type, which was akin to the orang, and of Asiatic, as opposed to African, provenance. He inclines to the view that some present African races have affinities with the gorilla, and others, perhaps, with the chimpanzee.

There is a full account of the various discoveries of the Neanderthal type, in which the author took a prominent part, and many of the illustrations of this type are from original sources. Besides discussing anatomical relationships the author deals with the development of human faculties, culture and society so as to provide an eminently readable introduction to Anthropology, accompanied by comments on the prospects for future development, as, for example: "It may be very detrimental to the whole mental life to check the child's instinctive love of fairy tales and similar literature, and give it premature intellectual instruction. How much is lost by forcing upon the poor brain so many things that are of no use to it!"

F. S.

CORRESPONDENCE.

Britain: Archæology.

Sheppard.

*To the Editor of MAN.*SIR,—**The Maglemose Harpoons.**

48

Referring to the summary of my written statement regarding the alleged Maglemose Harpoons (MAN, 1923, 31), may I make a slight correction.

The pits which have yielded Roman and later pottery have nothing to do with the harpoons, and the harpoons were not found in these pits. The pits were referred to by Mr. Armstrong in his address at Hull in support of the great age of the harpoons. They are not connected any more than is the stone implement which was produced for a similar reason, but which Mr. O. G. S. Crawford has since admitted does not help the matter.

The finding by the Committee of the Anthropological Institute that, in its opinion, "the workmanship of the barbs in the two harpoons is so similar as to point to their being the work of the same individual, though found four miles apart," is surely fatal. Is it possible to assume that the only two harpoons found in this country were made by the same man, who dropped one in the boulder clay under 24 feet of peat, and another in silt under 12 feet of peat, and, after being buried for thousands of years, these only two Maglemose relics should have been obtained within a few months of each other, and still by one man? This series of coincidences is surely a little more than any scientific person can be expected to swallow.

Yours faithfully,

T. SHEPPARD.

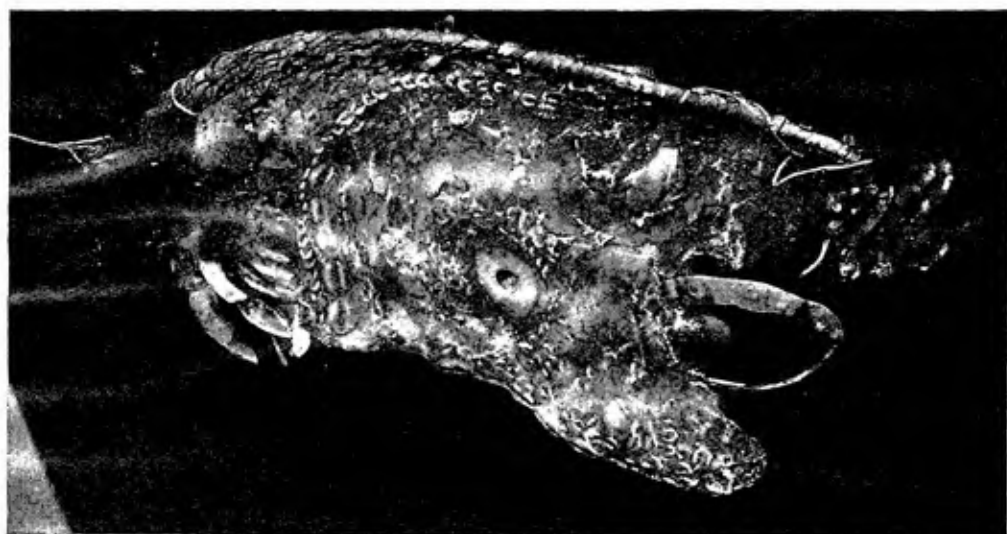
ANTHROPOLOGICAL NOTES.

The Tertiary Flints from East Anglia.—The current number of the *Revue Anthropologique* (Vol. 33, pp. 53-67) contains a report on Mr. Reid Moir's discoveries in East Anglia by MM. Lohert, Fourmarier, Fraipont, Hamal and Capitan, members of the International Commission which visited Ipswich last autumn to investigate the evidence. The general conclusions of the Commission are given on p. 44, the findings being that the specimens were derived from strata at the base of the Red Crag which showed no signs of disturbance, while of the specimens themselves, a proportion were doubtful, but some were indubitably of artificial origin and the handiwork of man.

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Prix d'Ault du Mesnil.—A triennial prize for a thesis on prehistoric anthropology has been founded by Mme. d'Ault du Mesnil in memory of her husband, who died in 1921. The first award will be made in 1924, when the value of the prize will be 1,800 francs. Manuscripts must reach the Secretary of the Ecole d'Anthropologie, from whom full particulars may be obtained, before 31st December, 1923.

Prix Hollandais.—Dr. Kleiweg de Zwaan, of the University of Amsterdam, has founded a prize to be known as the Prix Hollandais and to be awarded triennially for research in physical anthropology or prehistory. The award will be made by an international committee consisting of eight members, nominated by the Institut International d'Anthropologie. The first award will be made in 1924, when the amount of the prize will be approximately 2,500 francs. Candidates should apply before 1st November, 1923, to the President of the Institut International d'Anthropologie, 15 Rue de l'Ecole-de-Médecine, Paris VI^e.



A NEW FORM OF MASK FROM THE SEPIK, PAPUA.

ORIGINAL ARTICLES.

With Plate G.

Papua: Ethnography.

Haddon.

A New Form of Mask from the Sepik, Papua. By A. C. Haddon, 50
Sc.D., F.R.S.

Mr. Heber A. Longman, Director of the Queensland Museum, Brisbane, has been good enough to ask me to publish an account of a remarkable mask (Plate G.) which Lieutenant A. T. Jenkins obtained at Kambrinum, on the Sepik River in mandated Papua, and which he has presented to the Museum. I am also indebted to Mr. Longman for descriptive notes and photographs of the mask. According to Reche's map, Kāmbrinūm is 166 km. (about 103 statute miles) from the mouth of the Sepik (or Kaiserin Augusta Fluss).

The mask is oval in shape, with a maximum length of 400 mm. and a breadth of 240 mm. It is modelled on a wooden base, the circumference of which has a border of plaited cane-work, about 30 mm. wide, round the upper two-thirds; the cane-work becomes more open below and forms an outer band enclosing a zigzag band; these bands are constructed of stiff fibres bound round by flat strips of (?) rattan. The cane-work is attached to the wooden mask by cane loops, which are fastened through ten peripheral holes. The under surface of the wooden mask is very concave and has been hollowed out so as to fit the contours of the face of the wearer. There are openings for the eyes, nose, and mouth.

The features are modelled upon the wooden mask with a dark mixture of clay and gum. Above the forehead is a spreading frontlet of cassowary feathers. Below this are three projecting tusks of the Papuan boar and below these are about a dozen other tusks, the greater portions of which are imbedded in the cement. From the lower border of this series, a crocodile tooth, a piece of shell, and a fragment of a tusk form horn-like projections. The circumference of the face is outlined by a double row of imbedded small worked shells. On the forehead these two rows diverge to enclose a central oval plate of shell, which is flanked on each side by five cowries (*Cypraea*), the mouths of which alone are visible. The oblique eyes are formed of mother-of-pearl, the pupil being excavated; each is surrounded by a double row of small worked shells. The large nose is prominent, convex, and the long blunt tip curves downwards; it extends for 145 mm. from the eyes. Some half-dozen mouths of cowries are imbedded along the median line of the nose, and most of the rest of that organ is covered with small worked shells. Two small tusks project laterally from each wing of the nose and a pair of large tusks project downwards, their tips nearly meeting in front of the chin. Teeth are represented by several protruding disc-like pieces of shell. A piece of shell is imbedded in each cheek at the level of the wings of the nose. There are also some shells on the chin. The beard is represented by a number of wisps of vegetable fibre, which have been rolled with clay to form the cylindrical ringlets, so frequent a fashion of Papuan hair-dressing.

I have not been able to find any description or figure of a mask at all resembling this bizarre example, which differs from published specimens in having the face modelled on a composition in which tusks and shells are imbedded.

The masks of the Sepik are classified by Dr. O. Reche ("Der Kaiserin Augusta Fluss," Hamburg, 1913) into a few main groups:—

Skull masks, made of the human skull, which he regards as the oldest form: these are surrounded by a plaited cane framework, one example is from Kambrinum, 166 km. (Fig. 422), and two from Mändänüm, 194 km., one of which is a face only and without the lower jaw; both in Culture Area II.

Wooden masks: these, which are of very different sizes, are regarded by Reche as surrogates of the former and represent the faces of dead persons. Some of these

are more or less surrounded by plaitwork, and in others this may have been present, while in others again it was certainly not present, as marginal holes are lacking for its attachment. Reche remarks that most of those with surrounding plaitwork are naturalistic masks of the dead. These have eye-holes and the face is painted in various ways. They occur in Culture Areas I-III.

One group consists of quite a different type. These are flat, or only slightly hollowed out behind, and so cannot have been used as dance-masks. Reche describes them as "dead faces"; the eyes are inlaid with shells, the face is generally painted in a manner similar to those of the modelled skulls. They seem to occur in Culture Areas II and III.

Masks made solely of plaitwork do not concern us at present, nor do the very small carved wooden faces, like miniature masks.

Dr. O. Schlaginhaufen (*Ab. u. Ber. K. Zool. u. Anth.-Eth. Mus. Dresden*, xiii, 1910) describes seven types of masks (pp. 3-11, 63, 64): some from Mangut, about 70 km. (Culture Area I) have a little peripheral canework (Figs. C, F, L), as has one (Fig. D) from Olem, Wolem, or Ängöröm, 112 km. (Culture Area II). The faces are variously painted; the variations in type agree with those described by Reche.

Dr. W. Behrmann ("Im Stromgebiet des Sepik," Berlin, 1922) figures, but does not describe, dance-masks from Angerman, about 290 km. (pp. 229, 321), and from Kararau, 315 km. (pp. 39, 228). Only the first of these bears any resemblance to our mask, but the figure is too indistinct to be of any value. The few references to masks from this region by other authors do not throw any light on the mask here described.

A. C. HADDON.

Britain: Archæology.

Warren.

The Eolithic Problem: A Reply. By S. Hazzledine Warren, F.G.S.

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The purpose of the attack of Messrs. Barnes and Reid Moir (*MAN*, 1923, 32) is at least quite frank; namely, to cast discredit upon myself. It does not profess to present a reasoned discussion of the evidences upon their merits. I should not reply to an attack of this nature but for the fact (as my critics point out) that there is an error to be corrected, and (as I would point out) an error that should be placed in a fair and reasonable perspective.

In my paper of 1914 on the subject of flint flaking, the word "Watt" should be replaced by the word "Joule," but this alteration does not entail any further modification in the original text. It is admitted that no one should ever make a mistake, but my critics cannot afford to demand a perfection in others that one does not find in themselves. They give one no lack of openings for counter-recriminations, if one wished to follow their example.*

Much of my critics' energy is devoted to twisting my words into some exaggerated and erroneous meaning which neither was, nor could be, the intention. Mr. F. N. Haward has been the victim of the same method.

The misapprehensions and confusions into which my critics have fallen with reference to the import of the "Planes of Least Resistance" are being straightened out again elsewhere. They affirm that flint does not fracture more easily in one "direction than in another, and does not possess 'certain planes of least resistance.'" They have short memories. One of the main lines of argument used by one of them in favour of the "humanity" of the sub-Crag flakings is to the effect that the Bull-

* One might mention: the 300-tons to the square inch (which, I believe, was distributed over an 8-inch cylinder) in a letter press (*"Nature,"* Vol. LXXXVIII, 1911, p. 295); the horizontal sand pressures (*Proc. Preh. Soc. E. Anglia*, Vol. I, 1912, p. 181); the pair-of-tongs-ice-sheet (*ib.*, p. 193); the Ammonite-Mammoth (*MAN*, 1919, 10; 1919, 35), besides others. One notices that Mr. Barnes's impartial enthusiasm in the cause of scientific accuracy (*vide* his criticism of Mr. F. N. Haward, *Proc. Preh. Soc. E. Anglia*, Vol. III, 1920, p. 259) does not call him to condemn these errors.

head natural flakings always follow the lines of least resistance* (which is quite wrong, by the way), whereas the sub-Crag flakings are frequently cut against the grain of the flint. I believe that I was responsible for the phrase "Planes of Least Resistance," and for specifically applying it to certain important facts of flint flaking; these contradictions of my opponents represent different ways of misapplying the term to wrong uses. In their anxiety to put me in the wrong, in any way that offers, they have rather overreached themselves.

My critics condemn the variety of support employed in my experiments, and the averaging of the results obtained under different conditions. They would have adopted the same personal condemnation had I followed the contrary method. A variety of support (sand, gravel, clay, &c.) exists in nature, and if my experiments had failed to cover a wide range of conditions, this failure would have constituted a genuine point of weakness upon which my critics would have been the first to seize.

My experiments did not touch the physics of fracture, as such; they were planned to find out certain empirical facts of flint chipping which I, as a prehistorian, and not a physicist, most needed to know.

The theory of the origin of eoliths which I have endeavoured, however inadequately, to develop, may not be true, but it is a clear-cut, a fair, and a possible theory, which might be true, even if it be not. It needs to be met by an impersonal answer based upon the facts; an answer which is independent of anything relating to myself, or the turn of any phrases I may have used.

My critics so befog the issue with their ebullitions of personality against myself, that it is not easy to disentangle any reasonable answer to the theory itself.

The truth of the matter is that it has been my misfortune to discover many facts of flint flaking, both experimentally and by observation of nature, which are so unwelcome to my critics that in their excess of zeal they are oblivious to the consideration that their picturesque heroics addressed to my unworthy self do not affect the facts.

With reference to the comparison between the mechanical flakings and the eolithic groups, I have repeatedly invited Mr. Reid Moir to visit my collection and study the evidences properly, so that he might teach me to understand them better, and possibly learn something himself.

It is distinctly humorous when my critics solemnly tell me that I should have made a closer study of the evidences before offering an opinion upon them. They are unacquainted with the major part of these evidences and quite obviously do not know their true character, but one does not observe a corresponding reticence on their part!

I shall answer Mr. Burkitt later with the presentation of evidences of fact. I have recently published some items of new fact (*Proc. Geol. Assoc.*, Vol. xxxiv., 1923, p. 38) and others are following at no distant date.

No one can deprecate methods of personal attack more than I, but there are exceptional occasions when it is, I think, justifiable in the ultimate interest of the subject to take up the cause of self-defence. I do not intend to continue personalities; my aim is to lead up to a critical study of the true facts, into which I will not enter further on the present occasion.

S. HAZZLEDINE WARREN.

Balkan Peninsula: Ethnography.

Durham.

Some Balkan Taboos. By M. Edith Durham.

The Name Taboo.—In many parts of the Balkans which I visited, the taboo on mentioning the name of husband or wife was still strictly observed. In Montenegro old peasants would not give the name of their husband or wife. In

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* J. Reid Moir, *Proc. Preh. Soc. E. Anglia*, Vol. I, 1914, p. 403.

the case of the men it was usual to apologise for mentioning a wife at all. She was referred to as "Da oproshtish—moja zhena" ("If you will excuse me—my wife"). Nor was this only in the peasant class. All females were regarded as an inferior order of beings, and a man who had no sons, but several daughters, would state emphatically that he was childless.

Nor did the "chelyad" (a collective name for womenfolk) eat with the men in the older fashioned houses. Even in the house of a Voyvoda his wife, daughter and daughter-in-law humbly waited on the men and on me, fetching, carrying and not daring to sit down. They ate up what was left in private afterwards. When it was decided that I ranked as a man, mainly, I believe, because I wear my hair short(!), women often would not eat with me, and explained it would be "shameful" and would degrade me. My guide in Montenegro always ate with me. When he was absent from home for a week I vainly tried to induce his wife to take her dinner with me. She burst into tears when I pressed the point and said it could not be done.

An example of the name taboo is given in one of the Montenegrin peasant tales by Savo Vuletitch, himself a Montenegrin. "Petar Radisitch, though he had lived "on the best of terms with his wife for full twenty years, had never called her by "her name nor even spoke to her as if to a human being on any subject if it were "possible for a stranger to overhear. If he had to speak to her in public about "anything he uttered it through his teeth. And she did the same to him. To do "otherwise would have been shameful." In this tale, even when the wife is dying Petar cannot speak to her in the presence of the neighbours who come to aid her. He retains a stern front and breaks down afterwards when it is too late.

When I was doing relief work and having to catalogue and identify long lists of refugees, this taboo was a constant difficulty. A dozen or more women were, perhaps, all called Maria and all refused, with tears running down their cheeks, to give any further clue to their identity, or gave the name of the father in a distant village. "They are ashamed. You must not ask them," I was told, and found that I had asked an indecent question. "Ask another woman. She will tell you." And when the Maria in question discreetly retired, another woman revealed the horrible secret of the husband's name. This constantly occurred both among the Macedonian peasant women and the Albanian.

When I arrived among the Moslem Albanians at Vuthaj, where they had never before entertained a strange female, there was a very long pow-wow as to the correct course to pursue. It was decided I was far too important to feed with the harem. I was to rank as a man and feed with the chiefs. But to satisfy their sense of fitness I was helped last of all, even after my horse-boy, and so honour was satisfied.

Both the name and the food taboos being even to-day so common in the Balkans, it is strange to find Herodotus mentioning them as a peculiar custom of the Ionians, and accounting for it thus: "Even those who esteem themselves the most noble "of the Ionians, on first settling in the country brought no wives, but married a "number of Carian women, whose parents they put to death. In consequence of "this violence the women made a compact which they delivered to their daughters, "never to sit at meals with their husbands, nor call them by their appropriate "names" (Book I, cxlvi). As he expressly states, these Ionians appear to have been of very mixed origin, and says that "Molossians, Pelasgians of Arcadia and Dorians "of Epidaurus" were mingled with them, it seems probable that the custom is one common to the early inhabitants of the Balkans. Judging by the present Balkan peoples, it is certain that the custom was far more likely to have been enforced on the captured women by the men.

Taboo on childbirth.—In Montenegro a woman may not make bread or cook food after childbirth until she has been churched. This is done forty, or less, days after confinement. I was told that any food prepared by an unchurched woman

would be quite uneatable—unclean in fact. She was, nevertheless, forced to do very much harder work than cooking on the third day after confinement, having to resume the water and wood carrying that is considered particularly women's work. Wood and water I was told would not be affected by her condition. But I have known this severe work to cost the wretched woman her life, violent hæmorrhage ensuing.

And I was so frequently asked to "give a medicine" to cause the birth of a second child, that I concluded that this too early hard work was the cause of severe displacements and other complications. One child and never another seemed a fairly common state of things. And if the one was a girl, this was a catastrophe indeed.

In Montenegro also it is in the highest degree unlucky for a married woman to be delivered of her child in the house of her parents. Should this occur, every kind of misfortune would fall upon her brothers. This idea prevailed even among the "intelligentzia" of Cetinje. The wife of a Montenegrin Minister I knew was not permitted by her grandmother even to pay a call at her old home, for her confinement was very near and the grandmother was terrified lest it should occur there. As her husband had been summoned abroad and she had temporarily no home, she was forced to stay at a hotel until the event was over. "It is no good my trying to go home," she told me, "for in the future all misfortunes that happen to my brothers will be considered to be my fault."

Among the Albanian women I found that a woman was very frequently known only as the mother of her son. Thus I was on very friendly terms with poor old Sokol Batzi of the Gruda tribe, and often went to his house. The son and daughter were exceptionally well educated for these lands and spoke both French and Italian. But the old mother was always known as "the mother of the son of Sokol Batzi" or as "Kol's mother." This latter was what I called her. I never learnt her real name.

M. EDITH DURHAM.

Britain: Archæology.

Cooke.

On the Discovery of an undisturbed Midden and Firehearth at Chark near Gosport. By Lieut.-Colonel J. H. Cooke, F.G.S.

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The Midden sites at Hastings and in Cornwall show evidences of having been used by successive races, and the mixed cultures found in them extend from Neolithic times to the Middle Ages. The midden and firehearth recently discovered near Chark in Hampshire show no such mixture, and for this reason the details of their discovery may be worth putting on record. Chark is situated about 4 miles from Portsmouth, in the neighbourhood of Lee-on-Solent. Its position in relation to the surrounding marshland is shown in the sketch-map (Fig. 1).

The Common and the Quarry.—Chark Common is situated about one mile from the shores of the Spithead. It forms a part of a small plateau which is nowhere more than 30 feet above sea-level, the top of which is covered with a thick integument of gravel, capped with a layer of alluvium and stoney brick-earth. The district to the north was formerly a part of a broad stretch of scrub and heath land which extended up the Meon Valley, and east and west to the Forests of the Bere and of Waltham Chase. The peoples that formerly lived in the district had the advantage, therefore, of a hunting ground at their backdoor and a fishing ground on their front. The Alver stream provided them with drinking water; and the marshes made their flanks secure from attack.

Attention was first directed to the evidence of an ancient Kitchen Midden on the outskirts of the Common by Commander C. Hastings, R.N., who noticed the occurrence of shells in one of the sections in the Chark gravel pit. An examination showed that it was a true Kitchen Midden or refuse heap of a very ancient date.

Subsequent work disclosed, a few yards from it, two ancient firehearths. Similar Middens have been found in Ireland, Scotland, Devon, Cornwall, Sussex, and the Isle of Wight, but all of these show a mixture of cultures of various ages.



* Chark Common. Showing position of the Gravel Pit and Midden.
 Six inches to One Mile.
 The Shaded portions show land of Common liable to floods or land imperfectly drained.

FIG. 1.

The gravel quarry in which the discovery of the Chark Midden was made lies at the south-east corner of the Common. It forms a part of the rising ground between two small valleys through which brooklets run to the little river Alver; and it is easily accessible, being on the main road between Lee and Stubbington. The gravel has been excavated over a considerable area; and the bottom of the quarry is now nearly on a level with that of the adjacent valley. A ridge has been left by the quarrymen between the quarry and the valley; and it is in the face of this ridge that the Midden and the Hearths lie disclosed. The work of excavating the Midden was commenced at a point a few yards from the bluff, on the right hand side of the main entrance to the quarry.

The Midden and the Firehearths.—The sections in the quarry face (Fig. 2) show the following sequence, and indicate the position of the Midden and the Firehearths in their relation to the beds beneath:—

- (a) Surface soil.
- (b) Stoney loam.
- (c) Midden and Firehearths.
- (d) Stratified gravels.

The Firehearths lie at precisely the same horizon as the Midden, about 50 yards to the east, on the gravel surface and below the stoney loam. The Midden presents the appearance in section of a lenticular mass of shells, intermixed with loam. The section faces north, and was first exposed by the quarrymen, who removed the greater part of it in the course of their operations. It is not possible, therefore, to say how far it extended in that direction. Southwards, the Midden shelves to the narrow valley already referred to; and east and west it measures about 40 yards.

It consists almost entirely of the shells of oysters, whelks, mussels, and periwinkles, together with a few other species, for the determination of which I am

Section through Chark Midden; Plants.

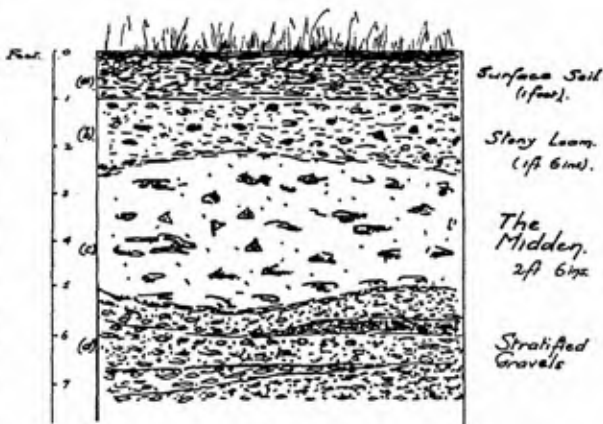


FIG. 2.

indebted to the courtesy of Mr. A. S. Kennard, F.G.S. The following species were observed :—

<i>Mytilus edulis</i> . Linn.	abundant.
<i>Ostrea edulis</i> . Linn.	abundant.
<i>Littorina littorea</i> . Linn.	abundant.
<i>Littorina obtusata</i> . Linn.	one example.
<i>Pecten varius</i> . Linn.	three examples.
<i>Purpura lapillus</i> . Linn.	two examples.
<i>Trophon murisatus</i> . Mont.	two examples.

Referring to the specimens examined, Mr. Kennard says : " The first three were undoubtedly used as food ; while the remaining species are accidental occurrences. " The shells of *Purpura lapillus* were unbroken, showing clearly that they had not been collected for dye. The use of this species for dyeing was apparently restricted to Cornwall and Ireland."

Such an accumulation of shells might suggest a sea-beach ; but this is negated by the facts that

1. The deposit is very limited in extent.

2. Nearly all of the bivalves consisted of single valves only. Only two specimens of oysters were found with the two valves complete.

3. The promiscuous mixing of shell fish, which in their natural mode of life are not found in association.

4. The absence of any beach shingle in, on, or around the deposits.

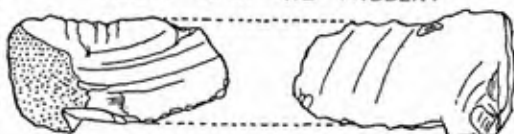
5. The intermixture of loam similar to the overlying soil.

6. The inclusion of implements ; the proximity of the camp fire ; and the similarity of all the phenomena to those of the well-known Middens of Denmark and elsewhere, justify the conclusion that the Chark Midden is a true type of the Middens of the Neolithic age.

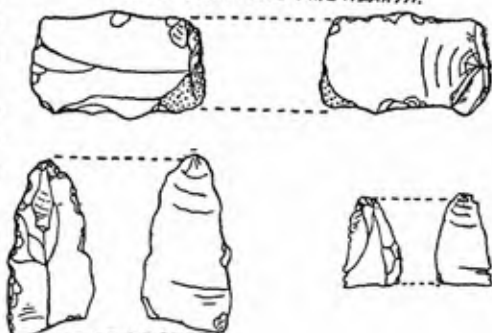
Some difficulty was experienced in excavating the Midden, as the surface soil of the section is thickly overgrown with trees and shrubs ; and it was not possible to cut a section through the main mass. The underlying gravel was, therefore, excavated first ; and the Midden deposit was extracted in masses, from which the shells were obtained entire ; and the finer material was sieved and examined. By this method many small shells were obtained that otherwise would have escaped observation. Four flint scrapers and several spalls were found with the shells.

The Firehearth, which are situated about 50 yards to the east of the Midden, were located by trenching round them, and removing the top spit to a depth of about two feet. This disclosed a layer of charcoal about 6 inches thick, intermixed with a large number of potboilers. The Hearths lay directly on the surface of the

FLINTS FROM THE MIDDEN.



FLINTS FROM THE FIRE HEARTH.



SCALE OF INCHES.

FIG. 3.

gravel, many of the pebbles of which were superficially scorched and blackened, showing that they had not been used in the same way as the potboilers. The comparative thinness of the charcoal layer, and its homogeneity, suggests that only one fire, and not a series, had been lighted. Towards the peripheries of the fireplaces were found five implements and a quantity of flint flakes.

The Implements.—The implements were submitted to Mr. Miles Burkitt and he suggests that they are probably late Neolithic or Bronze types. Several of them were found in immediate juxtaposition to the fire hearth and immediately on the surface of the gravel. They are patinated grey, which seems to indicate

FLINTS FROM THE STONEY LOAM.

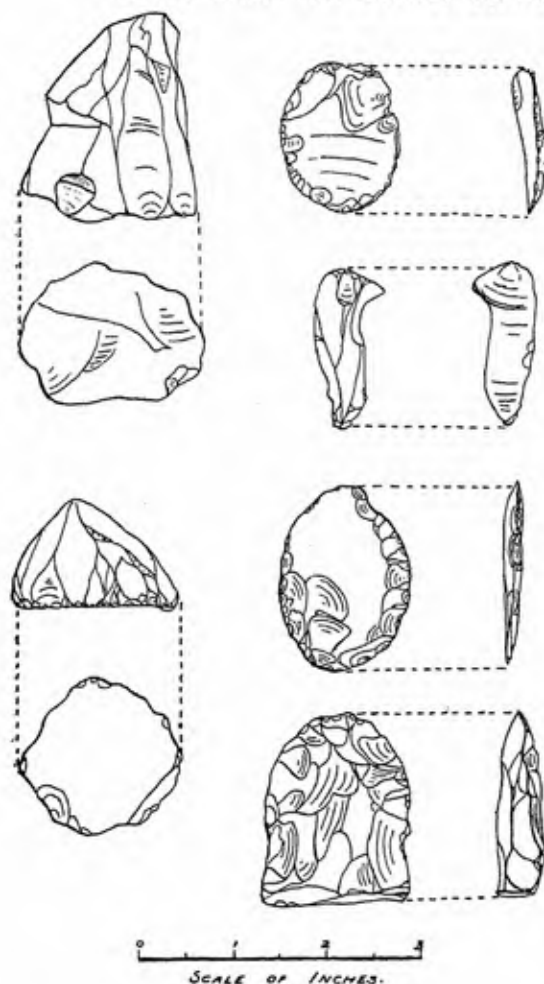


FIG. 4.

that they had been exposed on the surface of the gravel before they were covered by the stoney loam and alluvium. There was no evidence on, or near, the fire place of pottery; and no remains of bones or teeth to indicate the nature of the animal food cooked on the hearth. Great care was taken when collecting the flints to discriminate between those that came from the hearths and those that were found in the overlying loam. It will be seen from the illustrations (Figs. 3 and 4) that the implements are of rude workmanship; none of them show any signs of polish; and they are generally in an unabraded condition.

The following list shows what was found:—

1. The Midden. One fluted scraper; three flat scrapers; several spalls.

2. The Hearths. Five scrapers; many potboilers.

3. The Stoney Loam. A considerable number of implements and flakes were found in the soil overlying the Hearths. These included 10 cores; 9 scrapers; 1 borer; 1 fabricator; 1 wedge; and many spalls.

Dr. L. S. Palmer, who has an intimate knowledge of the district,

and to whom the implements were also submitted, comments on the distribution of the flints as follows:—"The cores do not seem to be in very close association with the firehearth. Communal cooking was very probably prevalent in Neolithic times, like communal pottery-baking with the pseudo-neolithic aborigines of Gran Canaire to-day, whilst the manufacture of flint implements was a more or less specialised craft with the later Neolithic peoples. Hence a very close association of potboilers and flint cores would not be expected, and is in fact

" seldom met with. This is in agreement with the distribution of the flints at Chark.

" It is also interesting that the flints found in association with either the Midden or the Firehearth are all artefacts, whilst those from the more superficial deposits comprise both cores and flakes, many of the latter being unworked." This suggests that the actual manufacture of implements was not carried out on the midden site itself.

" It is also in all probability not a coincidence that the patination on the flints from the neighbourhood of the firehearth is much more extensive than the patination on the flints from the Midden. These latter are still quite black, and were probably dropped with the food refuse, and consequently have never been exposed to the same atmospheric conditions as in the case of the flints dropped round the firehearth. This seems to support your conclusion that the Midden has remained undisturbed since Neolithic times."

Correlation.—The surface of the gravel bed, which served as the living floor, offers itself as an important piece of stratigraphical evidence for estimating approximately the period to which the Midden belongs. Eighteen sections lying in line between Lee and Selsey show the following sequence of beds in descending order :—

1. Alluvium.....rainwash.
2. Stoney loam.....rainwash.
3. Brickearth.
4. Coombe rock.
5. Stratified gravels (fluvio) or 15 foot raised beach.

In ten of these sections, the brickearth and underlying coombe rock are absent, and their place is taken by a stoney loam which has been constructed out of the material derived from the brickearth and the coombe rock combined. The stoney loam is, therefore, obviously of later date than the brickearth and coombe.

The sequence of the beds at Chark shows a small, but very important, variation in the above order, viz. :—

1, Alluvium; 2, stoney loam; 3, stratified gravel; 4, brickearth; 5, stratified gravel.

The Midden lies on the top of No. 3 Gravel; and it, therefore, overlies the true brickearth.

It has been shown elsewhere that No. 5 Gravel equals the 15 foot Raised Beach at Selsey and Hayling; and that these beds were formed during middle and late Paleolithic times.

Therefore it is now suggested, that the order of deposition of the Chark beds in point of time may be as follows :—

No.	Deposit.	Epoch.	Sequence dates.
1	Alluvium	Recent	
2	Stoney loam	Beaker period	N 60
	MIDDEN AND HEARTHS	Robenhausen	N 50
3	Stratified gravel	Neolithic	N 30
4	Brickearth	Neolithic	N 25
5	Stratified gravels and sand	Late Paleolithic	P 65

Column 4 represents Hazzeldine Warren's modification of M. de Mortillet's scheme of classification for expressing the relationship of the various periods. (*Geol. Mag.*, Vol. IX., March, 1902).

The details in the above table seem to be confirmed by the sequence of climatic and geographic changes suggested by the late Clement Reid, who has shown that the

south of England rose to a height of about 90 feet above its present level at the close of the Neolithic period about 3,000 years ago; and that from that date to about 1600 B.C. it slowly subsided to its present level.

During the Neolithic period, therefore, the Solent and Spithead probably existed only as a river valley; and the sea waters of the present channel then lay far to the south of the Isle of Wight. It was not until the return of the Channel waters, towards the close of the Neolithic period, that the Isle of Wight was again cut off from the main land, and the Spithead was made available as a fishing ground for the Hampshire tribes.

Conclusion.—One of the results of this investigation has been to establish the fact that the Midden and the Camp fires are coeval; and it has made the uses of both apparent.

Apart from its historical interest, the Chark Midden is unique of its kind, for, though it is not so large as the great shell heaps of the Continent, it has much in common with them; and it is the only instance of a Midden in Britain in which the contents are unmixed with relics of later cultures.

Its principal features are the undisturbed character of the deposits in which it is embedded; the many species of shells it contains; the well-marked types of implements found in it and around the adjacent firehearths; and the total absence of any pottery or metal fragments.

This last point and the preceding stratigraphical evidence afford grounds for suggesting that both the Midden and the Hearths belong to the Stone Age, and probably to the Robenhausen period which immediately preceded the Bronze Age.

J. H. COOKE.

Mesopotamia: Archæology.

Buxton.

Recent Excavations in Mesopotamia. By L. H. Dudley Buxton, M.A., **54**
F.S.A.

I am indebted to Professor Langdon for the material contained in this paper, my only regret is that, owing to other duties, the Professor was unable to write it himself. The excavations with which I propose to deal are being carried on by Mr. Mackay at Kish, which is eight miles east of Babylon, on the course of the ancient bed of the Euphrates. This city, of which the modern name is Shatt-en-Nil, was the ancient capital in very early times, and to it the kings of Babylon always looked with particular reverence even after their capital had been moved to Babylon. There are two great mounds on the site, the first, Oheimer, on the west side of the old course of the river, which is actually being excavated at present, and the second, Ingharra, two miles to the east, which is the more ancient of the two. According to the reports received from Mr. Mackay it seems that the city on the first mound was built some time after 2500 B.C., whereas prehistoric Kish was situated in the mound on the east side of the river. The present intention is to excavate on this latter mound next year; on the surface, spouted pots and plano-convex bricks have been found, undoubted evidence of its extremely early date. There can be little doubt that early Kish was a real centre of prehistoric culture; the *motif* of the legendary king who ascended into heaven on the wings of an eagle in search of the birth plant, leaving his dogs behind, who look up at him as he ascends, reached prehistoric Egypt.

Later Kish (Oheimer) suffered destruction at the hands of the Persians when they invaded Babylon and sacked all the outpost cities, and it seems probable that the city was methodically burnt. The excavation of the walls has shown that they are badly ruined and all the objects found have been exposed to intense heat. The staged tower has been uncovered on two sides; it is in quite good condition. The

walls are crenellated, a style which came in about 2500 B.C., about which time the tower was probably built. It is recessed with false pillars to imitate columns. On the south-east side a huge staircase led up to the top directly, not in a zig-zag. This appears to be the first tower excavated which has been so built. The temple E-unir-kidur-mak (the Temple of Adoration of the far-famed Abode) lies on this side. Both the temple and the tower were on one platform, about two acres in extent, which is at present being cleared. Cells have here been found which were the chapels of the gods other than the god honoured in the main shrine. Among the finds are two bricks of the first Babylonian dynasty. An account of one of these has already been published in the *Times* by Dr. Langdon. It belongs to Samsu-iluna (2080-2043), the seventh king of the dynasty and Hammurabi's successor. This brick says that he restored the temple E-mete-ursag, the Temple of the Adornment of the Hero (that is the war-god). Mr. Mackay has found the shrine E-kishibba where the war-god's statue stood. The second brick also says that Samsu-iluna restored the temple and in addition that the second king of the dynasty, Sumu-la-ilum (2211-2176), previously restored the temple. We have here then clear proof that the great kings of the first Babylonian dynasty paid respect to Kish and made restorations there, probably because it was an old Semitic centre. This attitude of reverence continued till later times and the recent excavations have thrown light on an old problem. Kerr Porter long ago found a brick which he brought back to the British Museum.* This brick belongs to Adad-apal-idinna, an Aramean usurper, who invaded Babylon and reigned there in the beginning of the eleventh century. The provenance of the brick found by Kerr Porter had been doubted, but recent excavations have shown that he was quite right in assigning it to Kish, where the tiling of a pavement has been found each brick of which bears this king's stamp. The old sentiment held, and the new king rebuilt the whole temple of the war-god, using the boasting phrase that he made it shine like the daylight. It had been known previously that Nebuchadnezzar the Great restored the temple, and bricks are constantly being found which bear this statement. In addition to these finds a statue has been found with an inscription which shows that it belongs to the Samsu-iluna period. We have, then, a series of dated bricks covering the period between the twenty-third and the sixth centuries B.C.; it seems we are justified in hoping that next year's excavations on the other mound will produce details of an earlier period.

In addition to these finds there are some objects from Mesopotamia being found which have a possible anthropological interest. From Nippur and other sites we are getting specimens of lapis-lazuli eyes from statues. Are these eyes intended to be realistic and have we here definite evidence that the early Sumerians were a black-haired and blue-eyed people? There is a very beautiful onyx eye recently acquired by the Ashmolean Museum bearing an inscription which shows that it belonged to Abi-eshuh, the eighth king of the Babylonian first dynasty. The realism and skill with which this is made are very striking, and in this case there can be no doubt that the artist meant to portray a brown eye. It seems suggestive at least to think that these later brown-eyed people were the conquerors of an earlier blue-eyed race. I have shown elsewhere† that blue eyes are not uncommon in the Eastern Mediterranean and it seems feasible to suggest tentatively, both on this and other grounds, that the Sumerians were akin to the early inhabitants of Cyprus. To-day we have reports of blue eyes among the Kurds. I am inclined to believe, then, that we have here an early extension of the Armenoid race. There seems no ground for following V. Luschan, who suggests the presence of Nordics. The problem

* "Travels," Vol. II, pl. 77.

† *Biometrika*, 1920. *J.R.A.I.*, 1920.

of the origin of the Alpine race is very obscure, but it is certainly of great value to know that very probably they, or a race akin to them, inhabited Mesopotamia in the third millenium B.C. The mound of Ingharra may, perhaps, give us further evidence about them next year.

L. H. DUDLEY BUXTON.

Africa, West: Sociology.

Migeod.

Arab Origins at Garun Gabbas. *By F. W. H. Migeod.*

55

A noticeable feature among the peoples west of Lake Chad is that many claim an origin from Arabia, and chiefly Yemen.

This means little more than that a leader arose who migrated west and collected a number of followers by slave-raiding and the prospect of loot, in the same way as Rabeh did at the end of the 19th century. The legends of this stream of migration are so persistent that an authentic genealogy proving it in at least one instance is of value in support of the general claim; and this is supplied by the town of Garun Gabbas. Many of the migrations appear to have had their origin in the refusal of certain persons and families to accept Mohammedanism, but whether the Arab tribes on the eastern side of Lake Chad owe their presence there to the same cause is another matter. In any case, Arab infiltration across Africa from the Red Sea and the Nile to Lake Chad did not begin in recent centuries.

The small town of Garun Gabbas is about 12 miles north of Hadeija. The present Bulama or Headman (Bulama is a compound Bornu word, meaning Town Headman), named Musa, claims to be of Arab descent and of a long line of kings. In appearance he is jet black, but with white whiskers, and I found nothing to distinguish him from a pure negro, except, perhaps, some slight difference of manner. One felt there was a distinction. He said he was not a Shuwa Arab, the Arab tribe living to the south of Lake Chad, but an Arab from Sham, i.e., Syria, and the line of migration of his ancestors was Sham, Kanem, Bornu, Kulumpardu (or, Kulumpandu), and thence to Garun Gabbas. His wife was Fula and his children by her spoke the language of their mother. His mother and grandmother were both Bornuese. He went the pilgrimage to Mecca before Rabeh's time, and was 5½ years away. He reckoned his present age at 55.

The founder of Garun Gabbas was one Ibrahim, and members of the same family went and founded the now more important city of Daura. Although the early inhabitants of Garun Gabbas were possibly largely Arab, the leader of the colonists was a Beriberi (i.e. Bornuese), known to them by the name of Zanoa, but his real name was not known. Zanoa's family no longer exists. The reason of the migration out of Bornu was that Ibrahim had a dispute with Mallam Mukhtar, his elder brother. He came along peacefully and there was no fighting. Although a Beriberi was the leader of the colonists, Garun Gabbas was never under the rule of Bornu. Nevertheless the inhabitants are said to have used the Kanuri language (the language of Bornu) in the days before the founding of Daura, the date of which I have not been able to ascertain with any degree of accuracy. The reason probably was that owing to the preponderating influence of the Bornu empire as far back as the thirteenth century, and possibly earlier, the Kanuri language became and still is very widely used. It had spread even to within a few miles of Kano. In any case the Bornu influence is reputed to have been very strong in Garun Gabbas.

An unexplained detail is why Zanoa does not appear in the list of kings.

There are twenty of the ancient families said to be still represented in the country. Some of the inhabitants had in recent years married Beriberi women, but Beriberi men had not settled there in great numbers. The town is now very small compared with what it was formerly. The present population is Fula,

Awuyoka (related to the Bedde), and some Beriberi, the Fula being in the largest numbers.

The old record of the kings was burnt accidentally six years ago (say 1916) I was told, but a new one had been written out containing all they could remember. In the original list was the number of years each king had reigned, but they could not be reproduced. The first on the list is Ibrahim who came out of Bornu, and it is said they were Mohammedans then and brought horses and asses, but not cattle.

As to the town, the old mud wall is now scarcely discernible. The Headman's house is surrounded by a high mud wall, but all the other houses are of grass and circular in shape. There are some baobab trees about, that at the rest-house being 35 feet in circumference. The soil between Hadeija and Garun Gabbas is dark grey clay, except where crossed by the numerous east-to-west sand ridges. On the low ridge on which stands the rest-house lies a little quartz gravel of very small size, which was the first I had seen on my westward journey from Lake Chad. Water was at a depth of twenty-two fathoms.

LIST OF KINGS OF GARUN GABBAS FROM A MANUSCRIPT.

ARABS.

1. Ibrahim.	7. Jatto.	13. Aburi.	19. Tagwoi.
2. Maji.	8. Amale.	14. Sakaina.	20. Jimami.
3. Kulada.	9. Mamadu.	15. Musa.	21. Balikurugu.
4. Yarima.	10. Donko.	16. Kujeilu.	22. Issiaku.
5. Kimeri.	11. Yahaya.	17. Adam.	
6. Donkofo.	12. Dan Assawa.	18. Aliyu.	

FULANI.

23. Buluwei.	25. Buri.	27. Abdu.
24. Guama.	26. Osumanu.	28. Abdu.

SLAVE OF KING OF HADEIJA, a pagan.

29. Baluwa.

ARAB. Grandfather of present man.

30. Mahaman Bako.

FULANI.

31. Tukur.	32. Buba.	33. Kao.
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ARABS.

34. Alhaji Abubakar, father of present man.	35. Musa (present man, 1922). F. W. H. MIGEOD.
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REVIEWS.

Africa : Ethnography.

Frobenius.

Das Unbekannte Afrika. By Leo Frobenius. Munich : C. H. Beck. 1923.

This splendidly produced work is illustrated by nearly 200 plates, over 50 charts of the distribution of cultures and cultural elements, and some hundreds of blocks in the text. From one point of view it takes the place of the last (unpublished) volume of "Und Afrika Sprach," but its real significance lies in its appearance as one of the publications of the Forschungs-Institut für Kultur-morphologie, for it is based on the collections, in print and MS., of this Institute, which is also issuing the "Atlas Africanus," a cartographical work, with

explanatory text, intended to set forth, and interpret, the distribution of the elements, mental and material, of the cultures of Africa.

Although the work, apart from plates, contains less than 200 quarto pages, it is nothing less than a review of the main features of African ethnography, and a restatement of the "Kulturkreis" theory with material modifications; it is at the same time a survey of the prehistoric and historic culture movements which have played their part in shaping the Africa of to-day. The radical nature of the change in the scheme of culture zones recognised by the author will be realised when it is mentioned that even so universally adopted a concept as the West African "Kulturkreis" goes by the board and in its place appear the Atlantic and South Erythraean cultures.

The author takes as his starting point two opposed but complementary forms of society which he calls "telluric" and "chthonic," the first being regarded as Aethiopic, the second as Hamitic: the former is patrilineal and agricultural, has no market, is organised in age-grades and has a belief in reincarnation; the latter is matrilineal and pastoral, fattens its maidens, lays stress on their chastity, and is divided into castes; its dwellings tend to be subterranean.

On these two primitive forms impinged at various times from the palæolithic period onwards waves of culture originating, some in Europe, some in Asia. North Africa was directly affected by two cultural movements—one, west to east, which passed from West Europe to the Near East in the Stone Age *via* North Africa; the other, east to west, travelled by water before it struck the coast south of the Mediterranean. As secondary results there came (1) to the mouth of the Zambezi from South Arabia the Ophiric culture (South Erythraean zone), its movement being conditioned by the search for gold; (2) to Abyssinia and the lands to the west as far as the Niger, the Cushitic culture (North Erythraean zone), with Sabæo-Akkadian elements; (3) to the area north-west of Chad from the Syrtes, the Garamantic culture (Syrtic zone); and (4) from the western Mediterranean (by sea) the Mediterranean culture (Atlantic zone). The two first-named, classed together as Middle Erythraean, and emanating immediately from Arabia, were preceded by an Early Erythraean culture, characterised by the slit-drum, bambu bow-string and other features, whose relation to the other culture waves does not seem to be laid down with great definiteness.

In addition to these culture-zones, the author recognises areas of influence where these four cultures met and engendered hybridised forms; thus the Congo basin, formerly reckoned to the West African zone, is now regarded as a territory mainly Atlantic in its culture, but with some South Erythraean influences; while the Guinea Coast, mainly Atlantic in culture, has suffered Syrtic influence in the great bend of the Niger as well as on the lower Benue, where the North Erythraean culture also impinged upon it.

The "Atlas Afrikanus" is still only in its early stages—three parts have appeared so far—but it is abundantly clear that the synthesis set before us in the work under review is, as it were, a summary of the inferences to be drawn from the completed Atlas; in other words, that it has to be dealt with, not as a brilliant piece of speculative culture history, but as a study documented as no ethnographical work was ever documented before, not only from all available literary sources, but also by the hundreds of replies received in reply to a *questionnaire* issued on an international basis. The critic must be prepared to point out, if he can, deficiencies in the data and misinterpretations of the evidence, or, alternatively, he must attempt the redistribution of culture elements into an alternative coherent scheme. The former task is simpler and, on a small scale, it is all that can be attempted here. As the work is, so far as its documentary basis goes, the work of a syndicate—the staff of the Institute which issues the volume—it will be only

by the joint contributions of an army of reviewers that the validity or otherwise of the scheme put forward by the author can be tested.

An inspection of the maps discloses that the area for which less information was available than for any other was the Ibo territory, east of the Lower Niger. According to the author, two features which characterise this area—the sexual freedom alike of unmarried and of married women—are to be assigned respectively to the Aethiopic and the Hamitic cultures; but the maps on pp. 73 and 75 show no such combination of the two elements as is found in the Ibo country, save south-west of Tanganyika and south-east of Victoria Nyanza. How does the author explain the co-existence of contradictory “symptoms”?

In this case the facts were clearly not at the disposal of Geheimrat Frobenius; in another case, however, he is fully acquainted with them and yet dismisses without notice what looks like a contradictory instance that cannot be ignored but demands to be explained. On p. 123 the map shows the distribution of a feature of the Syrtic culture, the importance of the number four, seen in the four gates of towns, the four passages of graves, and so on. Now, practical considerations may influence town-planning and the grave alike; if the number four is really a Syrtic symptom, it should also be prominent in religion, in the calendar and in daily life; yet, to take only one example, there are two great areas in which the four-day week is found, and neither of them is included in the Syrtic culture zone.

Even more paradoxical is an *obiter dictum* on p. 134 with regard to Egypt, which, in the author's view, “always received and absorbed but never imparted anything of importance.” Yet rites of mummification, reincarnation beliefs and terminology, nay, if Egyptologists are to be trusted, even the author's own archaeological finds in the Yoruba country, all seem to offer unambiguous evidence against this assertion.

There are other questions which invite notice, such as the omission to deal with elements of culture like the banana, which seems to have come from the East Indies and can hardly be included among the gifts of any of the cultures recognised by the author; the headhunting and skull cults of the Northern Provinces of Nigeria and the *marimba* both seem to point in the same direction. In fact, a reasoned justification of the abandonment of the Eastern origin of any elements of African civilisation would have smoothed the way for the reception of the author's later conclusions; a consideration of the sources of the domestic animals of Africa is likewise indispensable to a complete survey of African origins. But the object of this notice is less to criticise than to summarise the author's views, and other points may be passed over.

As an appendix to this notice it may be permitted to express the hope that steps will be taken to issue at least the Atlas in English and French editions; these, widely distributed, would bring about a rapid increase in the information available, and the lapse of only a few years would see a second edition with no blank areas, and invite Geheimrat Frobenius to delight alike the student and the lover of beautiful books with another volume no less fascinating than the one here reviewed.

N. W. T.

Guernsey: Stone Monuments

de Guérin.

An Annotated List of Dolmens, Menhirs and Sacred Rocks, &c. By Lieut.-Colonel T. W. M. de Guérin. Report and Trans. Guernsey Society of Natural Science and Local Research. Vol. XIX, 1922. Pp. 30-64.

Colonel de Guérin, the well-known archaeologist, has studied the early documentary history of the Channel Islands with special care, and, with the

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transference of the fine "Lukis" collections of prehistoric material to the public, he has taken up the question of their arrangement and of the researches necessary for the more complete elucidation of the problems they raise. In the course of this work, Colonel de Guérin reinvestigated some of the Guernsey megaliths, and his discovery of the sculptured figure on the under side of the capstone of the Déhus Dolmen was reported in *MAN* (Vol. XX, No. 66, 1920, Sept.). In all his work, Colonel de Guérin shows himself widely read in general archæology, British and Continental, and it is much to be desired that he should take a more direct and personal part in scientific life in this country than his heavy responsibilities as one of the leading public men of Guernsey allow.

In this article, which is one of unusual importance, he gives a list in which he traces 68 dolmens and cists and 39 menhirs—of which, respectively, 15 and 6 still exist. The others have been traced through references in terriers (locally "Livres de Perchage") and other legal documents. They are mapped as accurately as possible under the circumstances, and the place-names and folklore are studied in interesting fashion. The megaliths occur in local groups, of which seven can still be traced, most of which include both dolmens and menhirs; and in several cases the tradition of sanctity persisted down to the Middle Ages, whether in true or in inverted form, for the local connection between great stone monuments and witchcraft ceremonies is a very clear one, and Guernsey belongs to that western zone of Europe wherein the Church of the early Middle Ages found itself opposed by older rites gathering round the megaliths. Colonel de Guérin tells us that traces of rites gathering round megaliths have persisted almost to our own time in Guernsey, and their importance in modern Brittany is well known.

Colonel de Guérin thinks that the circles, first of sacred fountains, then of menhirs, and lastly of dolmens upon the hills surrounding the town, all point to the fact that a settlement of Neolithic man existed either on the actual site of the old town of S. Peter Port surrounding the place where the church now stands, or upon the plain that must have extended seaward four or five thousand years ago. It is interesting that, from the parish known as "The Forest," the author has not been able to find any trace of a dolmen, but there were once three menhirs in the parish.

It is much to be desired that Colonel de Guérin should induce his fellow-members of the local society to give us the same detailed information for the lesser isles of the archipelago, and that the Jersey Society should study the Jersey ones analogously. The difference in type between Guernsey and Jersey megaliths, the supposed contrasts between Guernsey on the one hand and Alderney on the other in this respect, raise interesting scientific problems. Probably, Jersey and Alderney were both joined, or nearly joined, to the Continent four thousand years ago, while Guernsey was already well out in the sea, and the relationship of Guernsey's monuments to those of West Brittany is very clear. That Jersey and Alderney contrast with one another as well as with Guernsey raises other points of interest, especially as Guernsey and Jersey seem to have no trace of that holding of land in strips which was a characteristic in Alderney, an island which has also yielded numerous remains of bronze swords.

With the Lukis Museum and its rich collections, with Colonel de Guérin and the students around him, and the able leaders of the Société Jersiaise, we should soon get a valuable re-survey of the Neolithic and Bronze Ages in the Channel Islands. Such a re-survey would bring out points of general value to science in several directions.

H. J. F.





Length 15 inches

STONE YOKES FROM MEXICO AND CENTRAL AMERICA.

ORIGINAL ARTICLES.

With Plate H.

America, Central: Archæology.

Lothrop.

Stone Yokes from Mexico and Central America. By S. K. Lothrop.

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Archæological studies in Mexico and Central America have placed on record certain classes of objects of unusual and definite shape and of wide distribution, the function of which is unknown. Stone yokes form one of the most important and mysterious of such groups.

The stone yoke is shaped like a letter U, and is about two feet in height (Fig. 1). The bevelled outer surface is often carved with elaborate designs, which have been analysed by Strebel,* Parry,†, Holmes,‡, Fewkes,§ and others. The distribution extends from Salvador across Guatemala, Chiapas, and Oaxaca to the central Mexican plateau, and thence eastward to the Gulf of Mexico. The centre of manufacture was the Totonac region, including the states of Vera Cruz, Puebla, and Tlascala, to which the stone yoke is connected not only by the number of specimens found, but also by the character of the decorative motives. Fragmentary specimens have been found at Copan, Palenque, and other Old Empire Maya cities, from which fact it is evident that the stone yoke was evolved before the abandonment of these cities at the close of the sixth century, A.D. On the east coast of Mexico, in the Totonac region, stone yokes have been found in graves, placed around the bodies of the dead. Such are the general facts now known.

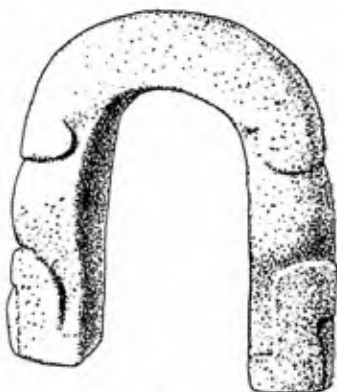


FIG. 1.

STONE YOKE FROM MOTZORONGO,
VERA CRUZ, MEXICO (AFTER HOLMES).

An aura of mystery has surrounded the stone yoke because it has been impossible to identify this object either in the native manuscripts or in the many available examples of sculpture in stone and clay. In consequence, there has been much speculation as to its function. The question of how it was used is answered by the figurine shown in Plate H, which was recently purchased by the writer in the city of Guatemala. The exact finding place of this specimen is unknown, but it is said to have come from the Department of Quiché. This is quite in keeping with the nature of the clay, thin and well fired, and of the peculiar creamy grey colour which characterises some of the pottery of the region named.

The figure is clad in a breech clout and a heavy sheet-like garment which reaches from the breast to the thighs. Spiral bandages cover the arms and legs. This peculiar dress gives ground for the belief that the figure represents a warrior clad in the cotton armour described in all early accounts of the natives, but of which no actual examples remain. The stone yoke is placed around the waist with the

* Hermann Strebel: "Studien über Steinjoche aus Mexico und Mittel-Amerika." *Int. Archiv für Ethnog.*, Vol. III, 1890, pp. 461-491. Also "Nachtrag zur Studien über Steinjoche." *Op. cit.*, Vol. VI, pp. 44-48.

† Francis Parry: "The Sacred Maya Stone." London, 1893.

‡ W. H. Holmes: "Archæological Studies among the Ancient Cities of Mexico." *Field Columbian Museum. Anthropological Series.* Vol. I, No. I, 1895, pp. 309-321.

§ J. W. Fewkes: "Certain Antiquities of Eastern Mexico." *Bureau of American Ethnology. Twenty-fifth Annual Report.* 1907.

open end at the right side of the body. It exhibits not only the typical outline but the typical cross-section, which resembles a truncated triangle. Some small object, now broken off and lost, was attached to the yoke at the base of the arched portion.



FIG. 2.

SCULPTURED STONE SLAB FROM
SANTA LUCIA CONZUMALHUALPA,
GUATEMALA (AFTER HABEL).

With the knowledge in mind that the stone yoke was worn around the waist, an examination of Middle American sculpture is singularly barren of representations of this object which can be identified. It is true that many figures seen on Maya stelæ and lintels wear about the waist a heavy projecting belt with numerous heads attached to it. These suggest the yoke, but not with great exactness. On several of the sculptured slabs from Santa Lucia Conzumalhualpa,* however, stone yokes are certainly represented. This site lies on the Pacific slope of the Cordilleras in Guatemala, not far from the town of Escuintla. The sculptured slabs to which we refer, some of which are as much as twelve feet high, characteristically represent a deity to whom an offering of a human head or heart is made by a man wearing a yoke. An example is shown in Fig. 2. The yokes, it will be observed, exhibit the characteristic bevelled outer surface and are placed with the broad side up, as is also the case in Plate H.

From the evidence which has been adduced it is manifest that the stone yoke was worn around the waist. From the nature of the object itself it is clear that it served no utilitarian purpose, and the problem has only been half solved until the purpose and symbolism have been explained. To this phase, however, we have no contribution to make. The personal belief of the writer is that the yoke may represent the underworld, because the outline resembles the Mexican symbol for that region and also because the yoke is associated with death and sacrifice in the Santa Lucia sculptures. This, however, is only speculation, and proof must await the presentation of new facts. S. K. LOTHROP.

Britain: Archæology.

The Piltdown Flints. By H. P. Blackmore, M.D., F.R.G.S.

Having recently, through the courtesy of Dr. Smith Woodward, had an opportunity of seeing, and examining the flint stones found in association in the gravel from which the Piltdown skull was obtained, I have no hesitation in stating that in my opinion they are humanly worked, and not the product of any of the so-called natural forces. Additional evidence is furnished by the bone implement found in the same deposit; the pointed end of this bone clearly shows marks of having been cut by a sharp flint, whilst the other end has evidently been

Blackmore.

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* These sculptures have been described by Habel, Bastian, Seler, Eisen, and Strebel. The pieces published are in the Berlin Ethnographical Museum. Other similar pieces stood outside the old museum in Guatemala City, which was destroyed by the earthquake in 1918.

rounded off so as not to hurt the hand when used for digging; it would have made a very useful tool for digging or grubbing up roots.

By some observers, the presence of a well-marked bulb of percussion is regarded as the only hall-mark of human flint-chipping, and this fact is undoubtedly of first-class importance, but it is not necessarily the only indication of man's work.

From the physical structure of flint, the various forms of fracture, and the accompanying surface condition, can be recognised by those who have studied this subject and had practical experience in field work; they can tell, for instance, the direction in which a blow has been struck to detach a fragment from the main body of a flint nodule: the direction of the blow consequently indicates the intention of the striker. In the early work the bulb of percussion is often not present: but another indication of human work exists in the presence of bruising, obviously caused by a number of smashing blows on one spot; the flint would not chip kindly, and consequently was repeatedly struck in the vain endeavour to detach a fragment of flint. The indication afforded by these repeated smashing blows on one spot may be regarded as the equivalent of the bulb of percussion.

These remarks apply especially to the flints discovered by Mr. Reid Moir, by whose kindness and liberality I have been able to study a great number of the examples obtained by him from the beds below the Norfolk crag. There is no doubt, in my mind, that these forms are due to human agency, probably a Piltown race who lived in the Norfolk district during the pre-Crag period. The men of the Piltown race were pocketless wanderers, who shaped any suitably sized flint, by roughly hacking off fragments, to make a tool serviceable to their immediate wants—having used it, the flint was either dropped or thrown away. It is clearly unreasonable to judge the workmanship on these early tools by the same rules as one applies to the later palæolithic implements, just as it is obviously unfair to question the human work on palæolithic flints because it does not accord with the fine ripple flaking of the later neolithic period.

The knowledge of the best manner of flint working was acquired very gradually—the early rough hacking gave way to more careful chipping, which was followed by flaking, ending in the perfection of work as seen in the delicate parallel surface flaking of the knives of Denmark and Egypt. Prof. Flinders Petrie has observed that the early Egyptian flint knives are worked by chipping, but that the ripple flaking belongs to the second prehistoric period.

It thus appears that a rough but very useful division of flint working in the three periods may be described by the terms *hacking*, *chipping*, and *flaking*: *hacking* for the eoliths, *chipping* for palæoliths, and *flaking* for neoliths. The assignment of the various flint implements to their proper relative periods has a geologic, as well as an archaeological importance, for when they are figured and treated as fossils they greatly assist geologists in coming to a right conclusion as to the age and position of many of the scattered beds of gravel and brick earths; especially is this the case in the absence of shells or other organic remains.

H. P. BLACKMORE.

India: Religion.

Pisharoti.

Notes on Ancestor-worship current in Kerala. By K. Rama Pisharoti.

60

Worship of ancestors is a common practice here. It takes various forms, the nature of which is determined more or less by the place the particular individual holds in religious, social or political life.

As in other parts, the simplest type consists of the Śrāddha, the offering of oblations by the nearest direct descendant of the deceased, on the anniversary of his or her death. This practice is common to all, and the failure to perform the Śrāddha is punished with social ostracism. A general Śrāddha also is commonly

performed by the senior member of the family to all the manes *en masse* on every new-moon day. This is done for the satisfaction of those ancestors whose lines have become extinct. Unlike the first form, it is not obligatory. The Śrāddha is purely a domestic function.

Another widely prevalent type is the setting apart of a particular room as the abode of the manes, who are supposed to safeguard the interests of the family. A lighted lamp is kept in this room, and admission is restricted to members of the family; even these are allowed in only after they have purified themselves by bathing and the like. This also is a purely domestic type, chiefly current amongst the Nairs. There is no daily worship and sometimes not even annual worship. The practice is not prohibited amongst the higher castes of Hindus. One of the rooms in the Palace at Cochin is thus kept in memory of a prince who died there.

The third, a still less common, but not rare, type seems to be closely related to the preceding. It consists in preserving in a place in the house—sometimes in the main building, sometimes in an outhouse—symbols to keep up the memory of a distinguished ancestor. The place thus assigned is looked upon as sacred; and the symbols used are sometimes a statue, or a weapon, generally a sword or a trident, if the ancestor happens to be a warrior; or beads or slippers or a danda (stick), if he is a spiritualist. This also is only a family shrine, and one of the members of the family acts as the priest. Such shrines are not generally open to outsiders. Worship is offered to the deceased ancestor daily, weekly, monthly or annually, as the case may be; but seasonal and annual festivities are celebrated. The most noted instance of this type is the shrine kept by the Pāzhūr Kaṇiyān, a traditional astrologer, to glorify the memory of, and get inspiration from, his distinguished ancestor.

A slightly amplified form of the same, and therefore appealing to a wider circle, constitutes another type. This may be of two kinds: sometimes the family shrine is thrown open to the public, when, for instance, an offering at a particular family shrine is supposed to be efficacious as a palliative for diseases and the like. Such, for instance, are shrines originally set up in honour of a distinguished Mantra-Vādin (a professor of the black art) and later thrown open to the public. Such a popular shrine exists at Idappally. At other times the shrine may be set up by a particular sect of people to honour one of their distinguished predecessors. As a notable instance, may be cited the building of a temple at Kāladi in honour of Śrī Śaṅkarāchārya by his disciples. It is not merely a sectarian temple, but a temple for all Hindus. In these there are daily ceremonies and annual festivals, a member of the family acting as a priest in the former case and a paid Brahmin in the latter.

Such family shrines and sectarian, class, or professional shrines sometimes grow into public temples. The passage of time and the growth of legends around the shrine probably account for this development. The shrines of the Chēramān Perumāḷ at Tiruvanchikulam is an instance of this. Local patriotism sometimes hastens such a development. In such shrines, there are all the paraphernalia of an ordinary temple.

Still another type is found in the institution of social festivities, of religious festivities, of social customs, and, lastly, of religious ceremonies.

Social Festivities.—The most popular instance of this type is the Ōṇam festival, celebrated by all people, rich and poor alike. This is in honour of Mahā-Bālī, and is accompanied not merely by feasting, but also by the setting up and worshipping in every Malayalee house of a symbolic statue of the revered king.

The Pauranic story of Vāmana's conquest of Mahā Bali, when divested of its poetic embellishments, seems to resolve itself into a political incident. This view is suggested to me by my esteemed friend, A. Krishna Pisharoti, an erudite Sanskrit scholar, who is now engaged in bringing out a history of Kerala and of the Malayalam language and literature.

The theory in brief is this. Mahā Bali was a powerful Dravidian King. In spite of all their efforts, the Aryans could not overcome him in battle, and so they resorted to strategy. They sought the help of a distinguished saint, now known as Vāmana, who, if one may theorise from his name, which denotes short stature, must have been a Dravidian, later converted to Aryan belief. He made the King promise to give him anything he asked, and then caught him in his own trap by claiming his whole kingdom. A true pattern of nobility, the King surrendered his whole kingdom. Struck probably by his generosity and a sense of repentance for the deceit, the saint obtained for him a portion of his kingdom, to which he had to retire.

The story says he became the king of the land of Nāgās. Kerala seems to be the land referred to as Nāga Lōka. For (i) Naga is the name given to the inhabitants of this land. (ii) Nāga Lōka is said to be bounded by the Western Ghats. (iii) The peculiarly Malayalee institution of the Ōṇam festival points to the intimate relation between Mahā Bali and the people of this land. (iv) And, lastly, the old princes of Kerala are said to have descended from Mahā Bali and his grandson Bāna.

In the light of this view, the exceedingly strong hold that the social festival has upon us is easily explained. When it is also remembered that worship is offered not merely to Mahā Bali, but also to the Deity enshrined at Trikkā-Kara, it may also be maintained that his capital must have been at Trikkā Kara, now a petty village situated not far from Ernakulam.

Religious Festivities.—Annual festivities are held in the temple at Trippunthura (Cochin State) in honour of a Nambudiri virgin lady, and of a carpenter.

Social Customs.—The custom amongst Āsāries (professional carpenters), who form a caste by themselves, of first serving their guests, is instituted as a mark of respect for the memory of Perum-Thachan (the great architect).

Religious Ceremonies.—As an instance may be mentioned the annual *Thēvara-Ssēva* (service of God), performed in the temple at Irinjalakuda, Cochin State, which indirectly keeps up the memory of some Nambudiris murdered by a rival clan.

I shall conclude this outline sketch with a reference to the origin of the very old and sacred temple at Cranganore which is held in great awe and reverence throughout all Kerala. It is dedicated to Bhadra-Kālī, whose wrath is supposed to be the cause of all epidemic diseases in Kerala. To gain her good will a big annual festival is held towards the close of February or the beginning of March, when thousands and thousands of people stream into the place from far and wide. The temple was founded between the years 115 and 125 A.D. by Chenguṭṭuva Perumāl, the Imperial Sovereign of all Kerala, who reigned from 69 A.D. to 125 A.D., to commemorate the tragic end of a faithful woman.

Kannaki was the fair and virtuous bride of Kovalan, a rich merchant, who lived in Chōla during the reign of Ilanchel-Chenni. He was reduced to poverty because of his loose life, and migrated to the Pandya Kingdom, accompanied by his devoted wife. There the unfortunate man was charged with stealing one of a pair of anklets intended for the queen and was hanged. The indignant wife proved the innocence of her husband at the court of the king and charged the king with unrighteousness. Cutting off one of her breasts, she threw it into the midst of the council-chamber and invoked eternal curses upon the king. She then rushed out of the court and ran to the hills, where she died.

One of the mountain chiefs, who was on his way to the court of the Perumal to pay his annual subsidy, happened to witness her death, and reported it at the court of his overlord. To this information Chāttanār, the court poet of the Pandya king, at that moment a distinguished guest of the Perumāl, then added the preceding details. The Perumāl was struck with pity on hearing the woeful story and asked his younger brother, Prince Ilankov Adigal, to commemorate it by

writing a book. The queen was so overcome with sympathy for her unfortunate sister, that she requested her lord to build a temple in honour of the devout and faithful wife. Thus, thanks to the royal sorrow, an excellent work, "*Chilappatikāram*," was written, and a temple was built, one of the most sacred in all Kerala, to preserve the memory of the tragic fate of a noble woman.

K. RAMA PISHAROTI.

Balkan Peninsula: Ethnography.

Durham.

The Seclusion of Maidens from the Light of the Sun, and a further note on the Bird Tradition in the Balkans. By M. Edith Durham.

61

A further point of interest in the ballad of Childe Jovan and the Daughter of Tsar Stefan (see MAN, 1923, 33) is the fact that she is described as having "grown up in the cage for fifteen years," and it is in "the cage" that her father visits her. On the word *kavez*, a cage, Filipovitch, in his edition of the ballads of Kraljevitch Marko (Zagreb, 1899) gives a note stating that this was the name given to the pavilion in which the Royal princesses of Constantinople were brought up, thus suggesting a similarity between the Byzantine and Serbian courts which doubtless existed. In the ballad of the Sister of Lek Kapetan, however, we find a similar reference which throws a different light on the "cage." Here we are told "the maiden, they say, has grown up in the cage; has grown up for fifteen years and never has seen the sun or the moon." Probably Tsar Stefan's daughter, too, was engaged to keep her from the sun and moon. For it is owing to her going upon the roof of the tower and attracting the light of the rising sun by putting on the glittering crown that misfortune befalls her. The falcon comes from the spot where the sun rises. And the tower in which he lives at Orluyevatz reflects the light of the sun from the golden winged ball upon its roof and the light of the moon from the metal of the roof itself.

These stories may be referred to the Danaid group of *Märchen*, which Hartland,* in discussing the belief in impregnation by the sun and the custom of female seclusion at puberty, points out is common in the Mediterranean area. He quotes an Epirote story from von Hahn ("*Griechische und Albanesische Märchen*," I, 295) in which a maiden, who has been promised to the sun, is shut up by her mother in a tower in which all apertures through which light might enter have been closed; but the sun sends a beam of light through the keyhole, which had been overlooked, to fetch her.

The fact that the Bird tradition is strongest in Albania, whose inhabitants call themselves eagles, and in Montenegro where the Montenegrins call themselves falcons, together with the fact that the Serb ballads in which the falcon appears are principally those of Kosovo and Montenegrin districts, whereas the term "soko" scarcely appears in the later and strictly Serbian ballads, led me to suppose that the tradition is probably one of the South rather than the North, one already there when the Serb invasion took place. Had it been brought in by the Serbs, we should expect to find it strongest in the North. Whereas it is in the mountain districts in the South West, to which the older inhabitant would naturally flee, that the tradition is still alive.

The doubtful point of this theory was the fact that the gymnastic societies of the Czechs, by means of which the national idea has been strenuously propagated for some time, are known as "Sokols." It seemed, therefore, possible, that the falcon was a Slav tradition.

*E. S. Hartland, "The Legend of Perseus." London, 1896. I, 99 etc.

By the courtesy of Mr. F. Marchant I have now learnt that the "Sokols" were founded as recently as 1862 by Miroslav Tyr and Jindrich Fügner. Tyr made a journey into Montenegro and was struck by the fact that the Montenegrins called themselves falcons and often wore falcons' feathers, and adopted the title for his gymnastic societies. Further, that there is no bird tradition in Czech literature.

This seems to show that the falcon or bird tradition belongs to the Mediterranean group of cults and is pre-Slavonic in the Balkans. M. EDITH DURHAM.

Indonesia: Megalithic Culture.

Perry.

Mr. Hutton's Comments on the Megalithic Culture of Indonesia.

By W. J. Perry.

62

In his work on the Sema Nagas, Mr. Hutton has included an Appendix (No. 5) entitled, "The Semas and Mr. Perry's Megalithic Culture of Indonesia," in which he attributes to me statements which, he says, are at variance with the facts so far as the Naga Hills are concerned.* As Mr. Hutton's remarks are bound to suggest that the general conclusions reached in my book are unsound, I feel impelled to try to correct that impression. I will take his principal objections *seriatim*.

Mr. Hutton makes me say:—

(1) "That hereditary chiefs in Indonesia claim descent from a sky-spirit." This, presumably, is contradicted because the Sema have chiefs, usually hereditary, who do not claim descent from the sky-world (148-9). So it would be if I made it. What I said was very different. In speaking of the coming to Indonesia of strangers who, I argued, brought with them the use of stone and other cultural elements, I said that "The immigrants appear to have brought with them the belief in a world in the sky, a belief which, so far as can be told, was not held by the indigenous peoples before their arrival. The members of those classes which were shown to have been founded by the strangers imagine that they go to the sky-world after death. In certain cases the hereditary chiefs claim descent from inhabitants of the sky-world, and the supreme being is sometimes a stone-using immigrant, or some one who is said to have lived on the earth" (181). In other places I said that the strangers "settled in some places and founded lines of chiefs" (71); that "the hereditary chiefs of Indonesia who are thus descended claim to be of divine descent" (73); further that "their chiefly descendants claim descent from beings of the sky-world" (85).

(2) "That the use of stone in general is associated with the presence of hereditary chiefs."

(3) "That the use of stone graves and stone seats is specially connected with hereditary chiefs."

Neither of these represents in the least what I said. The quotation in (2) is truncated. The context is: "The presence or absence of stonework in any place seems to depend principally upon the presence or absence of a chiefly class distinguished from the commoners by a special use of stone. If this be so, it is reasonable to suppose that the use of stone is an element of an immigrant culture associated with the presence of hereditary chiefs" (44)—which is not so dogmatic as Mr. Hutton would have it. If he had taken the trouble to quote the general conclusions at the end of the same chapter, he would not have produced the same impression. For I said that "the use of stone is an element of a culture which has spread to all parts of Indonesia in varying degrees, and in different

* He also devotes some pages (414 *et seq.*) of his work on "The Angami Nagas" to me, and his comments are of like value as representing my actual statements.

"ways, the introducers being strangers who often established themselves as chiefs" (49). In more than one place I have taken particular care to remark on the special case of the Naga tribes. When discussing the secular use of stone, i.e., for houses, seats, walls, I mentioned "the Tangkhul Nagas, who make stone houses, and among whom no distinct chiefly class has been detected" (56). In another chapter connected with Stone Origin Myths, it was noted that no people with a distinct chiefly class founded by the strangers had such tales. "As far as we know, none of the peoples discussed in this chapter have a class of hereditary chiefs who are distinguished from the commoners by the use of stone seats or stone graves of a special sort or size . . . the Naga peoples have, so far as we have been able to discover, no chiefs." The Tangkhul and Kabui Naga were mentioned in this connection as stone-using peoples with no distinct chiefly class (73 *et seq.*). Further on in the same chapter, I mentioned the Tangkhul Naga as a people "who have acquired a considerable use of stone and then have migrated" (84). It is patent from these quotations that, far from being contradictory, my statements are really in exact agreement with Mr. Hutton, when he claims that "the general conclusion . . . from the Naga Hills is that the use of stone and descent from sky-spirits is [*sic*] found primarily where there are democratic institutions" (391-2).

(4) "That the use of seats at all is foreign to the civilisation of Indonesia peoples, who habitually sit on mats or squat on the ground."

I bow to Mr. Hutton's superior knowledge. I should remark, however, that he says that "The sitting-places of a Sema village consist of a simple platform, generally of bamboo, and in front of the houses of important persons" (392). This suggests a specialised sitting-place, as I should expect. The point is, How do the Sema Naga sit in their houses or when away from these sitting-places?

(5) "That materials used for building probably do not depend on local conditions." This is beside the point. I have not discussed the question of building materials at all. My remarks were confined to the use of stone, and I see no reason to modify them. Similarly, with regard to

(6) "That working in stone is roughly co-extensive with a cult of sacred stones," for confirmation of which I refer the reader to my book.

(7) "That the existence of certain food tabus shows that the soul-substance of man is regarded as identical with that of the animals whose flesh is tabued." This contention I repudiate. The conclusion arrived at was quite different. "The available evidence thus points to the stone-using immigrants as the introducers of certain notions concerning the relations between men and some animals. These notions are based, it seems, upon the assumption that men and these animals differ from other organic beings in possessing a 'soul-substance,' which is derived from the sky-world" (159). On re-reading the chapter, I see no reason to depart from that conclusion. No attempt was made to use the relations between men and animals as an index of the ideas underlying that relationship. That suggestion was made on the basis of certain evidence derived from the ideas of the soul possessed by peoples of Celebes and Borneo. The question of food-stuffs was simply used to support the theory of a relationship between men and animals, it being suggested that such animals were not eaten because of some supposed relationship. Mr. Hutton makes a remark which goes to show that he has not properly understood the meaning of the argument. He speaks of Nagas as hardly likely to "think at all of the substance of the soul apart from the soul itself, for they do not grasp abstractions"—a statement that leaves one gasping. I was under the impression that, on pp. 149 *et seq.*, I had given a sufficiently clear account of "soul substance," which is nothing more than the "vital essence," the "life," as I noted on p. 149. No wonder my statements are misinterpreted.

Mr. Hutton mentions a matter in connection with the Ao Naga. "Mr. Perry's conclusions that myths ascribing the source of a tribe to a hole in the ground are 'due to the adoption of the culture associated with the use of stone and of the practice of interment' fails here. The Ao all ascribe their origin to a hole in the ground at the place called Lungtrok—'Six stones'—on Chongliemdi Hill, but they neither use stone nor practise interment" (393). On the occasion quoted I was discussing certain stone-using peoples, and made the following remark: "In a paper on 'Myths of Origin and the Home of the Dead in Indonesia,' I have quoted examples to show that those peoples who inter their dead generally believe that their ghosts go into the underground world, which is the supposed place of origin of the race." I then said that the peoples in question interred their dead and had this belief. "Thus it would appear that the form of the origin myth in which the ancestors of the race came out of the underground world by means of a hole covered by a stone, is due to the adoption by the same people of the culture associated with the use of stone, and of the practice of interment" (84). Cases such as that of the Ao Naga are well known to me, as is evident from the qualifications made in my statement just quoted. I allowed for such cases in another place: "I shall not discuss here all cases in which the thesis of the paper on 'Myths of Origin' appear to be contradicted. I shall reserve the consideration of such apparent exceptions until the time when I shall be able to discuss the problem at length" (113 n.l.). Mr. Hutton thus once again attributes to me positions that I have never adopted.

Mr. Hutton falls foul of me for grouping terraced irrigation and irrigation together under the heading of "terraced irrigation." I am quite prepared to include both as "irrigation." The point is that irrigation and terraced irrigation agree so closely in distribution with the building of megalithic monuments, that hardly any doubt can exist as to their intimate association. But Mr. Hutton, having found me in such serious error, cannot refrain from drawing the moral. "One hesitates after that to accept such a statement as that in Indonesia 'no signs exist of any beliefs in a world in the sky or in beings connected with it previous to the arrival of the stone-using immigrants.' At any rate, the heavenly bodies must have been there to rouse the natural imagination of men" (394). In what way has man in the Naga Hills been stirred by the heavenly bodies? Says Mr. Hutton: "The forces and phenomena of Nature, though not definitely deified by the Sema, are often regarded as the manifestations or abodes of spirits. In the case of the sun and moon, they are not worshipped or deified, and no clear conception at all is entertained of their nature. They are regarded as phenomena, and their existence is taken as a matter of course; but they are called upon to witness oaths and asseverations, and cannot be falsely invoked with impunity" (249).

Precisely. The sun and moon in certain places are practically ignored, and in others receive an elaborate cult. Given the invariable presence of the sun, how comes it that, in South-West Timor, the ruling class call themselves Children of the Sun, and that in Timor, and the islands to the east, an elaborate cult is connected with the Sun-god, while the Nagas have nothing of the sort? How is one going to explain this contradiction in the way hinted at by Mr. Hutton? The task is impossible.

Much more could be said about the remarks of Mr. Hutton, but space will not allow. I hope to have shown, by simple quotations, that the "conclusions" attributed to me by Mr. Hutton are but the veriest travesties of fact. Mr. Hutton is indulging in the time-honoured pastime of knocking down straw men. Perhaps, when he attacks me in another appendix, he will take the precaution of quoting my words in full, so as to enable the reader to judge the matter.

W. J. PERRY.

Egypt: Archæology.

Murray.

General Results of the Season's Excavations in Egypt. By Miss **63**

M. A. Murray.

The discovery of the tomb of Tut-ankh-amen has in a great measure eclipsed all the other finds of the year. Though sensational, it is also extremely interesting; but until the inner chamber is cleared, and the body (if there is one) is actually found, it is premature to speculate as to which royal personage is buried in the sarcophagus, or as to what his physical peculiarities may be. The mummy may prove to be a man, a woman, or a child; and after the extraordinary failure to recognise at once the sex of the body in the case of the mummy found in the tomb of Queen Tyi some years ago, it is advisable to abstain from theories until the facts are before us. The objects, however, which were found in the tomb are of great interest; many of them, though not beautiful, suggest a foreign imitation of Egyptian work. The alabaster vases are a case in point, as they are clearly an imitation of an Egyptian *motif* made by a foreigner who had no real knowledge of the original form. The spotted-lion couch is certainly foreign; the peculiar and distinctive trefoil-spots are unknown in Egypt and closely resemble Mesopotamian work, such as the little lion-figure recently found at Ur of the Chaldees. A great amount of foreign influence has always been recognised in the Tell el Amarna period, and here we reach an indication as to the country from which some of that influence came.

The British School of Archæology worked at Qau el Kebir, and found predynastic, protodynastic, and Old Kingdom tombs. Among the last were some of the late IIIrd or early IVth dynasties, a period which is at present not so well represented as the later part of the Old Kingdom. An important find was of the rubbish heap of an ivory worker's establishment of the New Kingdom. A number of more or less finished statuettes in ivory and bone were found; the ivory being of elephant and hippopotamus. The objects were among a number of fossil bones; and though the exact provenance of these bones is not known, they may prove to be of interest in themselves. A polished celt, always rare in Egypt, was found just below the surface; without unfortunately any means of dating it.

The expedition sent out by the New York Metropolitan Museum has made an important find of statues of Queen Hatshepsut. Hitherto no portrait of this queen is known, the reliefs in her temple being too conventional to be of real value. It is to be hoped that the Metropolitan Museum will publish the statues soon and adequately.

The Department of Antiquities has worked on three sites: at Saqqara, where tombs of the XIth dynasty were found; at Karnak, where the temple of Amen-hotep II is being cleared and restored; and at Assiut, where a great tomb is being excavated in which the stelæ from the temple of Wep-wawet had been thrown anciently.

M. A. MURRAY.

Obituary.

Childe.

Jaroslav Palliardi. By V. Gordon Childe.**64**

By the death of Notary Jaroslav Palliardi, a little over a year ago, archæology has lost an investigator who, though little known in the West, by thirty years of minute and painstaking research had made his Moravian homeland a chronological keystone for the prehistory of the Danubian lands. Since his discovery of the Moravian painted pottery near Znojmo (Znaim) when he was Concipient-notar there in 1896, M. Palliardi had devoted his energies to the investigation of the prehistoric sites of his native land. As a result he was able to determine stratigraphically for the first time the sequence of wares and cultures in those regions. It is due to his efforts that we know that the painted pottery comes later than the oldest phases of the *Bandkeramik* and overlaps the so-called *Stichbandkeramik* of

Bohemia. He has divided the painted ware in its turn into four consecutive groups, the last of which is equated with the lake-dwelling pottery of the first chalcolithic epoch. Finally the appearance of the bell-shaped mug (*Glockenbecher*) in those lands has been fixed at the end of that phase of culture, immediately preceding the full Aunjetitzer culture.

In the studies which led up to these results, Palliardi excavated no less than 15 neolithic and six chalcolithic stations, as well as two contracted burials of the pre-Aunjetitzer type and twelve belonging to the bronze age, four cremation burials of the Lausitzer epoch and nine of the Hallstatt period. The results of his work are only partially published and mostly in Czech, "Vyzkumy přehistorické jehozapadní na Morave" appearing in 1894 being the earliest. But although a strong nationalist, he has given valuable summaries in the *Mittheilungen der prähistorischen Commission der k. k. Akademie in Wien* (1897), and later in the *Wiener Prähistorische Zeitschrift*, notably in the paper "Die relative Chronologie der jüngeren Steinzeit in Mähren" in the issue of 1914. The final and complete exposition of his discoveries, M. Palliardi had reserved for a book upon which he was actually engaged at the time of his sudden death.

To-day the Palliardi Museum, housed temporarily in three rooms behind his old notarial office at Moravska Budejowice (Mährisch-Budwitz), where he had lived since 1901, forms a lasting monument to his labours; for M. Palliardi spent no less care on the preservation and arrangement of his material than on its discovery. Thanks to the kindness of Madame Palliardi and M. Frantšek, the Mayor, I recently had the privilege of viewing this collection under the capable guidance of its collector's pupil and collaborator, M. Vildomec of Boskovštýn, who alone now possesses the personal knowledge necessary for the proper exposition of M. Palliardi's unpublished discoveries. There in the show-cases and cabinets is revealed in unusual richness and detail the substantial record of Moravian prehistory. The most sensational exhibit is, of course, the unique series of painted wares, including a number of complete vases illustrating the continuous development of Moravian pottery from the oldest stage of the *Bandkeramik* to the end of the neolithic period. Other treasures are the models of gabled huts from Boskovštýn (probably the oldest in Central Europe) and Střelice II, the figurines with upraised arms from Stepanovice, bird models, and axes of jadeite. The value of the collection is enhanced by the presence for comparison of sherds and artifacts from the Tripolje culture, Cucuteni, Transylvania, and Vinča. At the excavation of the last-named site, M. Palliardi himself assisted Professor Vassits.

V. GORDON CHILDE.

Italy: Religion.

Rose.

The Festival of San Zopito. By H. J. Rose.

The article by Mr. J. A. Spranger on the above subject* is so full of interest and information that I venture to point out a few weak points in the author's interpretation of the facts, not in any carping spirit, but by way of contributing to a good and useful piece of work.

St. Zopito may, I think, safely be omitted in all consideration of the interesting agricultural rites which bear his name. That he represents an ancient deity of any sort, and in special, that his name is derived from ζῶφυτος, I do not believe. The late Latin form of that word would be *zofitus* or *zofytus*, *φ* becoming *f* (its modern Greek pronunciation) as in Italian; the classical sound was an aspirated *p*, something like English *ph* in *up-hill*, which passes into Latin *p* only in early Republican borrowings. Moreover, I find no case of its use in a sacral connotation; Aeschylus (*Supp.* 857) means, perhaps, "generative blood," i.e., lusty virility, by ζῶφυτον αἷμα,

* *J.R.A.I.*, LII. (1922), p. 306 sqq.

see Tucker *ad loc.*; Plutarch (*Romulus*, 20) does not use it as an epithet of Earth in general but of the particular patch of earth in which Romulus's lance took root; other authors (see Liddell and Scott, and van Herwerden's "Lexicon Suppletorium," s.vv.) use it and the cognate verb *ζωφύρειν* of vigorous and flourishing plants; no one in speaking of a god. The account which Mr. Spranger has found of the discovery of the saint's tomb seems credible enough; the searchers came across a tomb in the catacombs of S. Callixtus, marked presumably with a palm or what was taken to be one, and bearing a defaced inscription in which they fancied they could make out the word *zopitus*. I suggest that they mistook the first letter and should have read *sopitus*, "asleep," i.e., "dead" or "died"; for this euphemism see any large Latin lexicon under *sopio*.

The festival, then, is one whose presiding deity, if it ever had a non-Christian one*, is completely lost. Of those Mr. Spranger mentions, Flora or Flusia (the Oscan form of her name) is likely enough; the Roman *ludi Florales* began on the last day of April. But the emphasis laid on the excreta of the ox reminds us that the ancient Italians were perfectly familiar with the use of barnyard manure (*stercus*, *finus*), and invoked, among other minor deities, a spirit whose name, preserved by Tertullian, Lactantius and Isidore of Seville, is variously written *Sterculus*, *Sterculinus*, *Stercutius* and *Stercutus*. The ox is also a very familiar figure in ancient ritual, being the proper victim of Iuppiter, who had agricultural functions among other, the bull not being sacrificed to him in purely Roman worship.

But, apart from this, the procession is a very intelligible piece of magic. The beast of most importance in agriculture, represented by a particularly fine specimen, full of *mana*, but not an animal reserved permanently for sacral purposes, is "led through the streets . . . while a house-to-house collection takes place" (p. 310), surrounded by good magical influences (sacred images, ribbons, red cloth, and a young child on its back), besides the bagpiper, the later equivalent of the classical *tibicen*, or hautboy-player, whose business it is to drown all sounds of ill omen. It is then taken to the holiest place available, the church, where it is filled with yet more *mana*; and whatever it does after that is sure to be potent for good, especially if it gets to work to make the soil fertile by direct and obvious means. All about it crowd people who for various practical reasons want as much fertility, human or other, as they can get. Except that the procession goes through and not around the town, which is more Greek than Roman, the whole thing might be a free description of an *amburbium*.†

There is therefore no need to invoke Cretan parallels, since the religion of Crete was remarked by the ancients themselves to contain some very unusual features, and I know of no ethnological connection between its population and that of the Abruzzi. Still less need one assume the truth of the ingenious, but very hazardous, combinations put forward by Miss Harrison. H. J. ROSE.

REVIEWS.

Fiji.

Brewster.

The Hill Tribes of Fiji. By A. B. Brewster, F.R.A.I. London: Seeley, Service & Co., 1922. 8vo., pp. 308. Illustrations and Maps. Price, 21s. net. **66**

This is probably the most important contribution of material for the study of Fijian Anthropology since the Report of the United States Exploring Expedition

* So simple a ritual does not really need a presiding deity. In any case, while very ancient in principle, and therefore, perhaps, a survival, it may have been dropped and re-invented many times since first the neighbourhood was settled by peasants.

† Cf. the famous ritual of the *ceri* at Gubbio.

(1845) and Missionary Thomas Williams's "Fiji and the Fijians" (1858); and it is certainly the more valuable in that Mr. Brewster has deliberately abstained from theorising on the facts he records. His opportunities have been quite exceptional; and he has used these greatly. He has spent forty years in "the Islands," in most sympathetically and tactfully administering the affairs of the Hill Tribes of Fiji. Acquiring at an early stage an exceptional knowledge of the colloquial language of those among whom he lived, and imbued with an innate sympathy for them, and always firm but kindly in his ways, he has seen into their habits and thoughts more clearly than has been possible to anyone else.

The material which he has gathered is chiefly of two kinds: that which he saw with his own eyes and heard with his own ears, and that which he has induced the more able and better educated of his native staff to jot down, always in their own language.

The accuracy of his own observations is beyond praise; and the value of the notes by natives which he has collected, the greater part of which he has been prevented from using in this book primarily intended for the general reader, is so great that it will be most lamentable if the rest of his Fijian notes are not permanently recorded while he himself—he is the only man who can properly interpret these—is alive.

It is impossible here to notice in any detail the many subjects with which he has dealt; but, as an example, mention may be made of one.

The origin of the Fijians who were found in the islands when Europeans first entered there is still obscure, and will probably not be ascertained, if ever, until exact investigation of old burial places has been made and recorded. All that it is as yet safe to assume is that the native folk were the outcome of a mixture of Polynesians and Melanesians, the last named having been the earlier occupants, and that the Polynesians entered the island of Viti Levu, with which alone Mr. Brewster is concerned, at some point on the eastern coast, and that they came, from the Friendly Islands, within the last two centuries. Mr. Brewster has now collected, from native sources, important and apparently trustworthy evidence as to the time and places at which these Polynesians came in, and as to the way in which these "heroes" were adopted by the Melanesians as their tribal Chiefs, and were regarded, after their deaths, as more or less divine.

The book, as has been said, is primarily intended for popular reading. Anthropologists will regret that this has caused the omission of much detail which would be of great importance to the student. Probably to the same cause is due the fact that the illustrations in the book, though good in themselves, do not seem very appropriate to the text; for instance, the several pictures of canoes seem to have little to do with a book devoted exclusively to the Hill Tribes as distinguished from the Coast Tribes of Fiji. The index is excellent, and the maps are much to the purpose.

EVERARD IM THURN.

Religion.

Frazer.

The Golden Bough. A Study in Magic and Religion, by Sir James George Frazer, F.R.S., F.B.A. Abridged edition. London: Macmillan & Co., Ltd., 1922. Pp. XIV, 756. Price 18s. net. **67**

To those who are familiar with the "Golden Bough"—and who is not?—it must appear that the labour involved in compressing the twelve volumes of the third edition into one must have been stupendous. Even though that one volume consists of nearly eight hundred pages, it is a remarkable achievement, and bears evidence of the most minute care in construction. The result has been attained partly by the omission of all footnotes and exact references to authorities, partly

by some condensation of the argument in certain passages. In the main, however, the language of the original has been preserved, together with as much of the evidence as is necessary to illustrate the leading principles which, naturally, are retained. No new matter has been added, although Sir James, in his preface, is able to allude to a number of points on which fresh evidence has confirmed his conclusions or furnished further illustrations of the principles he has formulated. In its new form, the "Golden Bough" will gain an even wider circle of readers than it has had hitherto. Although the student will continue to find the twelve volumes of the third edition indispensable for purposes of reference, there will be many to whom the compendious single volume will make a strong appeal by the impression it leaves upon the mind of the reader of the unity of the author's conception as a whole, of the lucidity of his argument and of the beauty of his style. It is one of the few cases in which abridgement has been successful, because, in essentials, it is the "Golden Bough" unchanged.

E. N. F.

Language.

Ogden and Richards.

The Meaning of Meaning. By C. K. Ogden and I. A. Richards. London: Kegan Paul, 1923. 12s. 6d. net.

68

The outlook of this book is primarily philosophical, but Dr. Malinowski contributes a supplementary essay "on the problem of meaning in primitive languages" that the anthropologist as such cannot afford to ignore. It would hardly be in point here to discuss the general question what significant thought is and how such significance is conveyed by the use of appropriate language. Suffice it to say that the main treatment appears to be analytic or normative rather than historical in purpose. In other words, the ideal function of language regarded as a vehicle of meaning is sought, and certain standards are set up whereby many actual modes of speech are judged to be unsatisfactory in an absolute way, and not relatively to the psychological needs of those who may happen to employ them. The student, however, who regards the subject from a historical and comparative standpoint, eschewing judgments of value altogether, is bound to take note of the fact that a large part of mankind is not especially interested in communicating by means of spoken or written symbols the sort of knowledge that, according to the philosopher, is most expressive of reality. Now, to classify and adequately illustrate the motives of savage speech is a task that no anthropologist has hitherto undertaken; and it is to be hoped that Dr. Malinowski, with his insight and experience, will follow up the clues that his short sketch reveals to us—clues that certainly seem to lead to the heart of the labyrinth. Speaking offhand, one can but guess that there are at least two main types of primitive speech-activity. One of these is talking for talking's sake. At one end of the evolutionary scale there is the ape relieving his pent-up feelings in chatter, and at the other end there is the poet's song, which, as some one has said, is not meant to be heard, but rather is overheard. The other type is talking in order to get others to do what one wants. What one wants is often so plain as hardly to need the telling, and in such a case the object of speech is above all to move. For the rest, such positive information as it may be necessary to convey will consist in particulars having reference to the given situation. Presumably some savages—our own barbarous ancestors, for instance—are to be credited with mental powers as considerable as our own. But these powers may be utilised in different ways. The savage lives in a very small world, which it pays him to explore very thoroughly, so that he knows it and expresses it bit by bit. But ours is an immense world, which we, individually, can never know and express except in wholesale fashion. So we deal in generalities, and rarely develope that sense of detail shown, let us say, by the native tracker. If any one has it among men

of high culture, it is the artist, not the man of science. Correspondingly, then, language reflects the difference in our mental habits. Meanwhile, all men alike express less than they mean, and mean more than can be grasped by thought alone.

R. R. MARETT.

CORRESPONDENCE.

Mesopotamia: Archæology.

de Crawshay.

To the Editor of MAN.

69

SIR,—**Prehistoric Man in Mesopotamia.**

From Captain T. P. Aldworth, D.S.O., O.B.E., in Mesopotamia, I have recently received many flint implements of Azilian-Tardenoisian type which, I thought at the time, constituted the first discovery of this age of prehistoric man there. My attention, however, has since been called to the flint instruments previously found by Mr. Campbell Thompson and Dr. H. R. Hall in the same area.*

They were found in the area of which Samarra forms the centre. In a certain position, Captain Aldworth says, he found excavations which had been dug 3 feet to 3 feet 6 inches deep. In the sides of these trenches, also in the thrown-out material, he found numerous specimens of the Microlithic industry. I have compared them with those discovered by Miss Caton-Thompson at Helwan, near Cairo, in 1922, finding them identical in all respects but colour; being almost uniformly grey and light shades, whereas the Helwan flints are dark in tone; each core flake and worked tool can be duplicated from among the Helwan flints. Among them is one small fragment of an implement made of cherty flint exactly similar to the material of which the Abydos Palæoliths are made, bearing ripple flaking; the scrap of cortex being red-ochre coloured, also similar to that of Egyptian Palæos.

Captain Aldworth also sends me one small Palæolithic flake found in the same area "on the open desert." It is lustrous, very waterworn and probably sand-polished since.

Yours faithfully,

DE B. CRAWSHAY.

June 2, 1923.

P.S.—Since writing the above I have received a further parcel from Captain Aldworth, containing similar Microliths, which he found in the vicinity of Ur of the Chaldees.

DE B. C.

June 12, 1923.

ANTHROPOLOGICAL NOTES.

An Imperial Bureau of Anthropology and the Extension of Anthropological Studies. At the Edinburgh Meeting of the British Association, in September 1921, the following Resolution was adopted by the General Committee and referred to the Council:—

70

(i) That it is in the interests of the Empire that a knowledge of Anthropology should be more widely disseminated.

(ii) That for this purpose Universities and other Institutions be encouraged to provide instruction in this subject.

(iii) That there should be a central institution in London, not necessarily new, for the collection, co-ordination, and publication of the results of anthropological research, and the provision of information derived therefrom, for the use of the Imperial Services, teachers, missionaries, and others.

* See *Archæologia*, Vol. LXX. 1920. Pls. VI-X and *J. Egyptian Archaeol.*, Vol. VIII, 1922. P. 253 and Pl. XXXIV. Dr. Hall, however, considers the implements found in his excavations at Tell el-'Obeid to be of Chalcolithic age.

The Council of the Association accordingly invited the Universities, and certain learned societies and other institutions, and the principal Chambers of Commerce to send (1) information as to their own activities in anthropological teaching, (2) opinions as to the objects set forth in Resolutions i-iii, (3) suggestions as to the best means of giving effect to them. Following on the replies from the bodies addressed, a conference of representatives of these bodies was held on May 23, 1922, at which a Joint Committee consisting of representatives of the Conference and of the Royal Anthropological Institute was appointed to confer and report as to how far it would be possible for the Royal Anthropological Institute to undertake the functions of a Central Bureau for anthropology on the lines suggested by the Conference.

This Joint Committee recommended *inter alia*—

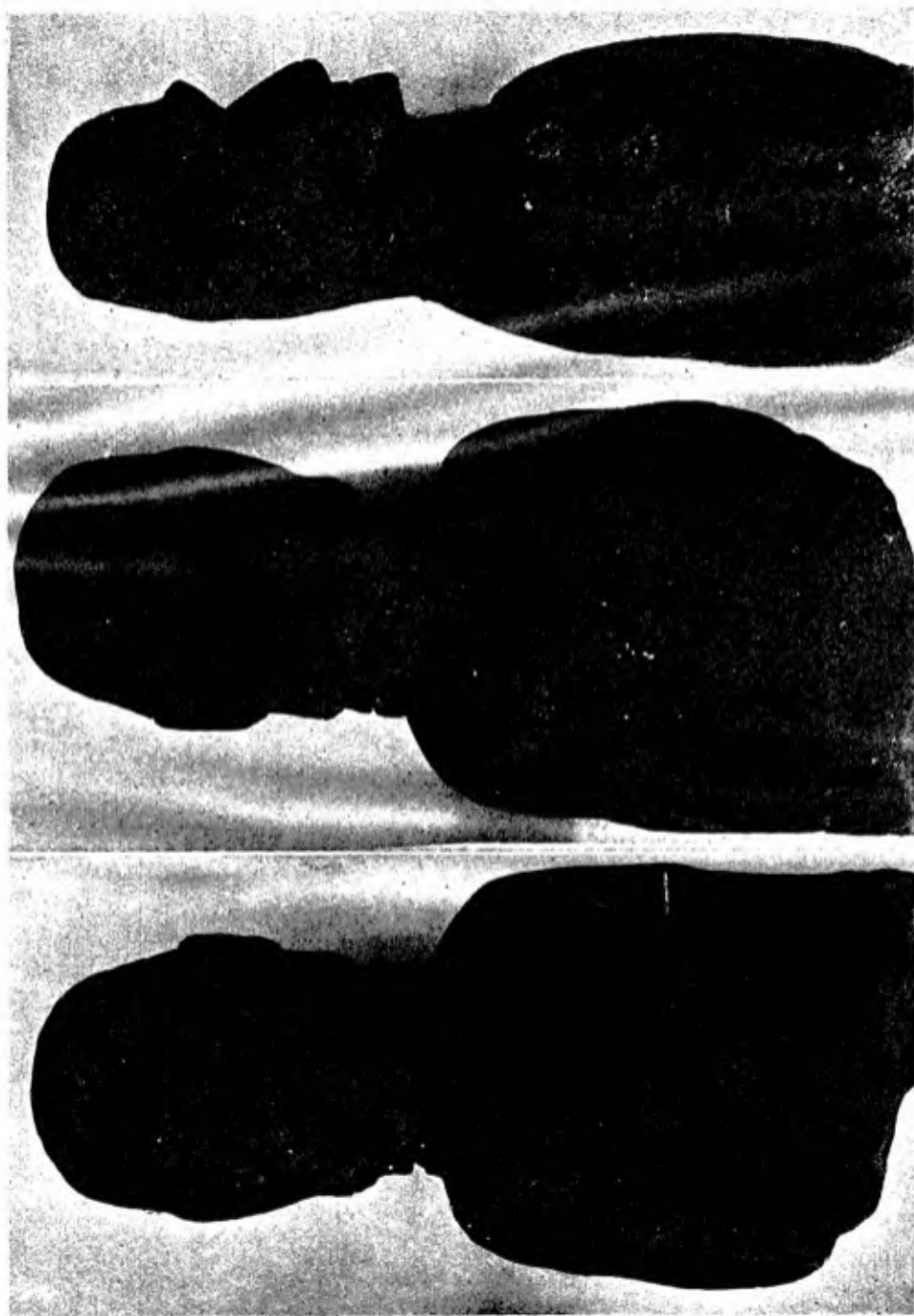
That in the event of the Royal Anthropological Institute undertaking the functions proposed in paragraph 4 of the resolutions adopted by the Conference on May 23, 1922, its Council be requested to appoint a permanent committee, to consist of representatives of the Institute together with delegates from Universities and other Institutions engaged in anthropological work, to consider in what ways the provision for anthropological teaching and work may be extended.

The recommendations of the Committee were adopted by the Conference on January 9, 1923, when it was also resolved that the Council of the British Association be requested to forward to the delegates at the Conference copies of the recommendations of the Committee, desiring them to invite their respective societies and institutions to state at an early opportunity in what way they could help the Association in carrying out the recommendations and, further, whether they were prepared to co-operate with the Royal Anthropological Institute.

The Council of the Royal Anthropological Institute, having had before it the suggestion of the Council of the British Association that it should assume the functions of a Central Bureau, resolved to reply that while it agreed to act as a Central Bureau, the efficiency with which it could perform such functions was necessarily determined by the financial resources at its disposal. It further intimated its readiness to appoint a Committee to deal with matters relating to the extension of teaching and research.

Favourable replies from the majority of the institutions addressed by the British Association in regard to their co-operation with the Institute have been received and the Council of the Institute has appointed a permanent Committee to deal with matters relating to teaching and research. This Committee consists of a nucleus of Members of the Institute and of Delegates who have been nominated by Universities, University Colleges, and other bodies interested.

The first meeting of the Committee was held on May 29, when the greater part of the business transacted was concerned with the arrangements for future meetings. Sir Hercules Read was appointed permanent Chairman. The Committee will in future meet three times a year, additional meetings being held should need arise. Before it will be possible to mark out in greater detail the field of the Committee's work, it will be necessary to ascertain how far facilities for anthropological study are already provided by Universities and other institutions. Information on this point is now being obtained, which will be submitted to the Committee at its next meeting and thereafter be available for consultation at the offices of the Institute.



RAPÁ NUI: A STONE IMAGE.

ORIGINAL ARTICLES.

With Plates I-J.

Easter Island: Art.

Beasley.

Rapa Nui: A Stone Image. By H. G. Beasley.

71

The stone images of Easter Island have always aroused considerable interest among students and Mrs. Routledge* has lately added much valuable information to our scanty knowledge. It is seldom that stone carvings of any description turn up in Europe and I was well satisfied with my day's work when I discovered this small image (Pl. I-J) in a shop on the Continent; its total height is only 9½ inches (24·8 cms.), so that it probably represents the private effigy of some individual. The material is similar to that usually employed, being a volcanic ash, much decomposed on the surface, which at some time has been covered with red ochre. Objects of value or veneration were thus treated, particularly sacred stones and chicken gods. Actually but a small amount of work has been put into the figure, yet the results are distinctly good. The side view shows a decidedly strong profile, whilst the pronounced overhanging brows are distinctive of nearly all the larger images. The domed head is unusual, for Mrs. Routledge found only one example during the whole of her excavations. The ears and arms are scarcely indicated, the former are unusually short, and are ribbed, which occurs on the wooden effigies, whilst owing to the base of the figure having been fractured (which appears to be more or less contemporary, since the fracture also bears traces of red paint) the hands are not shown; the mouth is weak, being merely a shallow groove, but, on the other hand, the nose and particularly the nostrils are well executed and in good proportion; the double lines which form the eyes, although seemingly rough in the front view, cleverly suggest the heavy eyeballs and come out particularly well in the profile. One of the results of the Routledge Expedition has been to show that, in addition to the images erected on the platforms, a large variety of smaller stone objects were made for personal use and, as niches are found in the inner walls of the houses, it is probable that small images such as that under discussion were placed therein. H. G. BEASLEY.

America: Technology.

Ling Roth.

American Quillwork: a Possible Clue to its Origin. By H.

72

Ling Roth.

In Captain A. W. F. Fuller's Collection there is a pair of quillwork leggings which merits attention, and Captain Fuller has consequently kindly permitted particulars of the leggings to be made public.

Both leggings are almost identical in shape, design and technique, which tends to show that they are a pair. The dimensions are: along the top, 29 cm.; at the bottom, 20·5 cm.; down the centre, 37·5 cm. There is a slight variation in the colour of the two. Both are of thick dressed buckskin (what we would call wash leather). In outline they have the form of a bird with outstretched wings, the tails being partially cut out and left hanging by a narrow connection. Along the top runs a piece of folded, superiorly dressed, thin white skin, something like kid, sewn on with cotton and no doubt a recent addition. Along each side is sewn on, by means of sinew, a thick piece of buckskin about 9 cm. wide which has been cut into horizontal strips, which strips hang down perpendicularly and form the fringe. In among the fringe are attached the upper bills of the puffin, as well as some more elongated bills of another species of bird.

The design in the quillwork represents a bird supporting a bear. The quillwork is of the usual type, being mostly composed of short, flattened quills, passing between

* Routledge, "The Mystery of Easter Island." 8vo. Lond., n.d.

two lengths of sinew, held in position by lugs 14 to 17 cm. long, cut out of the surface of the leather as shown in Figs. 13-17 in the *Jour. Roy. Anthr. Inst.*, Vol. XXVIII, 1908, and partly as borders as shown in subsequent figures in the same paper. The colour of the quillwork is white, green, and red-brown, with dark brown for the



ONE OF A PAIR OF QUILL-WORK LEGGINGS WITH CHILCAT DESIGN
A.W.F. FULLER COLLECTION.

FIG. 1.

eyes and eyebrows of the bear and the pupils of the side-eyes. A feature of the workmanship is that, contrary to the usual custom as I have found it elsewhere, the design has been painted on before the quills were attached, presumably to

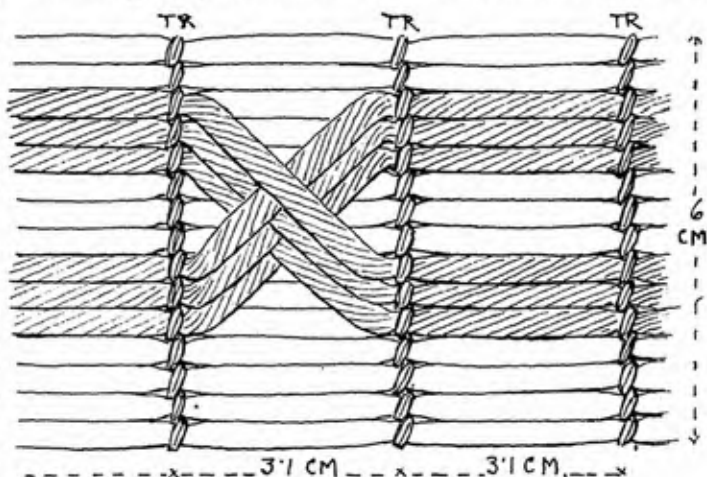
serve as guide to the embroiderer. The paint is mostly black and is found throughout under the white quills, except in the case of the bear with white forepaws, where there is no paint at all. Black is also found under the green quills of the bird and the side eyes of the salmon head. Red paint is found under all the red quills, except two short horizontal pieces on the tail. It also appears under the green oval of the tail. There is no paint under the red paws of one bear, nor under one green tail oval. There are two sets of tie-bands of leather on the back, one each side at the top and the other set half way down.

The design indicates that these leggings come from the Chilcats or Haidas, or the closely-related Tlingits. As to other records of this class of legwear, Dr. J. R. Swanston mentions (*Bur. Ethn.*, 1904-5, p. 466) a Chilcat Shaman dress which includes leggings; and Lieut. G. T. Emmons and Dr. Franz Boas give an illustration of one in Fig. 592, "The Chilcat Blanket." There is in these records no reference to quillwork, but only to the twining technique. The interest in these articles centres in the design being of quillwork, because usually that class of work does not appear to be recorded so far west and north. Mrs. Charlotte Cameron certainly mentions finding in a large emporium at a township called Marshall, below Nulato, on the lower reaches of the Yukon, and almost on the extreme west of Alaska, a quantity of mocassins some of which were beaded, "and on others considerable decorative skill was displayed, such as ornaments of flowers made of split and dyed porcupine quills, looking as if woven of silken thread;" and Captain Angus Buchanan refers to a Cree Indian on the Crooked River, a tributary of the Deschutes in Oregon, who wore mocassins "that fitted like gloves, decorated with interlaced coloured straws

"on the foreparts," which straws were most probably quills, as they would appear at a superficial glance. One would like to be able to prove a little more definitely the existence of the quillwork in these western and north-western parts of America (the portions of America nearest to Asia), but the Americans are a very homogeneous race, and as quillwork had a very extended range, it is more than probable that further

investigation will show that we have not spread this range too far afield. Our enquiry, however, leads us still further afield.

At the closing of the Japanese Exhibition held in London in 1910, Dr. H. S. Harrison obtained for the Horniman Museum an Ainu mat and bag with technique and design which appear to have remained unnoticed so far. The mat (Fig. 2) is made of strips of coarse fibre, held together by single paired twining. The decoration consists of darker strips of the same material applied in lengths which are worked in through the twined rows on top of the strips of which the mat consists. The only design is a piece of crosswork as shown. On the bag (Fig. 3) the design is different. Some of the applied dark strips are run through the twined work as in the mat, but

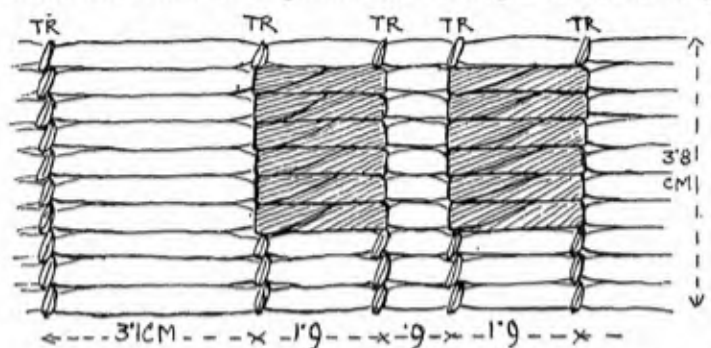


ORNAMENTATION ON AN AINU MAT. HORNIMAN MUS

FIG. 2.

others—and here comes the interesting part—instead of continuing straight along are turned back at the twined rows, and I find this is done in exactly the same fashion as is done in American quill decoration.

The principle of lapping the quill ends over a band (weft, twined-work, sinew) is the one which distinguishes the technique of American quillwork from that of



ORNAMENTATION ON AN AINU BAG. HORNIMAN MUS.

TR = SINGLE-PAIRED TWINED-ROWS WHICH HOLD TOGETHER THE STRIPS OF FIBROUS MATERIAL OF WHICH THE ARTICLES ARE MADE. — THE SHADED PORTION INDICATES THE APPLIED DECORATION.

FIG. 3.

“very sharp bone is used to make the holes. The point of the awl is pushed through from the back and the quill pulled tight, leaving a bit of the end to be bent and pressed into the skin” (University of Pennsylvania, *The Museum Journal*, December 1921, p. 250). Where has he seen this done? I fail to see how such a method could give the permanence we find in this class of work, and I think Mr. Farabee is mistaken.

If we find among the Ainu mat-makers the same technique as that of the American quillworkers, though in a more rudimentary form, and bearing in mind the ethnic connection between north-east Asia and north-west America, together with the existing fact that quillwork is found on the north-west coast, we may, perhaps, venture to suspect that the technique was brought from Asia, and that the Americans in later times, finding that the soft, porcupine tail-quills were adaptable for this form of decoration, made use of the comparatively new-found material and gave us the much-admired quillwork ornamentation, an invention in itself of no mean order.

[Before closing, I would like to call attention to a paper entitled “A Letter from Mr. John Reinhold Forster, F.R.S., to William Watson, M.D., giving some Account of the Roots used by Indians in the neighbourhood of Hudson’s Bay to dye Porcupine Quills,” read before the Royal Society, February 27, 1772.]

H. LING ROTH.

Psychology: Racial.

Myres.

Correlation of Mental and Physical Characteristics in Man: being a summary of the opening address in a discussion which took place in Section H, at the Meeting of the British Association at Hull in September, 1922. By Prof. J. L. Myres, D.Sc., M.A., F.B.A.

73

Is it possible to correlate mental qualities with physical in such a way as to establish the psychological counterpart of a racial type? Principal

considerations, to be submitted to psychologists and ethnologists alike, are as follows :—

I. It is common knowledge that among individuals, in any modern society of mixed racial ancestry, dispositions and faculties differ; that such mental qualities are inherited like physical characters, though the more promiscuous breeding which Man tolerates among his own kind than among his "domesticated" animals makes observation difficult and experimental verification impracticable. Galton's "Hereditary Genius" is, of course, the classic in this field of work. It may be inferred, however, with some probability, that these "family traits" of temperament stand in direct relation with some factors in the nervous system; and experience of large families strongly suggests that Mendelian uniformities of inheritance exist in Man, as in other natural species. There is, further, a general belief, based on wide popular experience, that particular temperaments may be presumed to accompany certain physical peculiarities, such as red hair, an amber-coloured or a steel-blue eye, a "cupid's bow" mouth, a "horse face"—like that in the eighteenth-century portrait of Alderman Hinderwell in the Town Hall at Scarborough, whose surname commemorates so neatly its mental counterpart. Some of these physical and mental counterparts are sufficiently widespread over large areas as to claim provisional acceptance as racial qualities: the plodding, detail-loving industry of the mid-European "Alpine" strain; the restless, imperious individualist "drive" of the "Boreal" blonde. Others, like the red pigmentation already mentioned (which recurs in the more artificially established breeds of horses, cattle, dogs, cats and poultry), seem to result from disturbance of physiological and psychological make-up by cross-breeding.

II. Analogy from the artificial selection of breeds of domesticated animals supplies, in regard to various high orders of mammals, the experimental verification which is impracticable in man. For it is possible in horses and dogs to enhance and to recombine mental qualities as well as physical, either by directly breeding for that object, as with collies, bulldogs, or spaniels, with the result that, of pups selected for preservation because they display recognised "points" of build and colouration, a large proportion display, when adult, the concomitant intelligence, tenacity, or, amiability. Exceptions, such as congenitally "gun-shy" pointers, or "snappy" Pekingese, seem to fall within recognised Mendelian categories, and illustrate the occasional appearance, for example, of an incurably "gun-shy" individual in an "old army family," or an Engels among the offspring of a mill-owner.

We may infer from all this that the hypothesis that mental characters are correlated with physical, and transmissible in such correlation, stands the test of experiment among the higher mammals, the "domesticated" varieties of which are the nearest available analogue of the long "domesticated" though still sadly "mongrel" mankind, a single *species* broken up by long segregation under different geographical conditions into strongly-marked racial *strains*, which have latterly been enabled to interbreed again more or less at random, in proportion to the success of various human attempts to transgress the limits of each racial "cradle-land."

III. In accordance with this body of experience, we find that the older ethnologists, relying mainly on observations made among still unsophisticated "natives" of various secluded regions, by travellers who were themselves still rather of national than of cosmopolitan-European descent and education, habitually described the racial types in their classifications of Mankind by mental as well as by physical characters. This begins with Linnaeus and Blumenbâch, and persists, for example, in Dr. Haddon's revised (1920) edition of Keane's "Man, Past and Present," where we read (p. 255) of the Northern Mongols as follows :—

"Temperament of all true Mongols and many Mongoloids, dull, reserved, somewhat sullen and apathetic; but in some groups (Finns, Japanese) active and energetic; nearly all brave, warlike, even fierce, and capable of great atrocities, though not normally

cruel; within the historic period the character has almost everywhere undergone a marked change from a rude and ferocious to a milder and more humane disposition; ethical tone higher than South Mongol, with more developed sense of right and wrong."

Here we have three kinds of characterisation, which illustrate both the strength and the weakness of this method of approaching the problem:—

(a) *Description of mere psychological reactions to external stimuli*, such as physical discomfort or irritation, obstruction or peril, conceived as being real psychophysical characters of this racial strain, which could be elicited in any individual, and might serve, like brachycephaly or yellow skin-colour, to refer a given individual to his racial type, if you met him in the dark.

These are presumably no more capable of rapid change than headform or pigmentation, so long as the breed remains unmodified.

(b) *Description of social reactions* (e.g., sense of right and wrong) depending on habitual coexistence of such individuals.

At all events it deserves investigation whether the infant North Mongol has a "higher ethical tone" than the South Mongol infant; and whether the foundling Mongol's "sense of right and wrong" differs from that of European children brought up in the same English or Chinese institution. The experiment might also be made of marooning, let us say, Robinson Crusoe on one island, and Ah Sin on another, and (after sufficient purgatory) exposing both to similar moral temptations, by floating ashore a negress, or a cask of whisky. Here we are no longer dealing with psycho-physical reactions simply: a social, cultured element has been introduced: the individual has a post-natal experience, as well as pre-natal equipment. And it may turn out to be difficult to eliminate this disturbing factor. I have, however, had in my employment, in the Levant, half-bred offspring of British fathers, brought up from birth by Greek mothers, and working side by side with comparatively pure-bred Greeks: I should not like to say that the "ethical tone" or the "sense of right and wrong" was "higher" on either side; but the response to various aspects of labour and discipline differed quite as markedly as the physique of the individuals, the *temperament* closely following *breed*.

(c) Thirdly, in our Mongol "character-sketch" we have an odd admission that "within the historic period" the North Mongol character has undergone a marked change.

Does this refer to the social, or to the psychophysical response? If to the former, how are we to correlate these modifiable responses with changes in the social organisation on the one hand, and with the presumably constant racial character which is the other factor in the experiment? If to the latter, i.e., if the psychophysical make-up of the Mongol has changed "within the historic period," are we to suppose (1) that the concomitant physique of the Mongol has changed likewise in so short a zoological period; or (2) that there is no such exact correlation between mental and racial characters as our initial hypothesis presumed; and, if so, how do mental characters arise, and change, independently of racial physique?

IV. More modern ethnology, relying less on empirical impressions, and more on analysis and experiment, has naturally made most progress in the departments such as sense-acuity, colour-perception, and the like, where physiological observations are easiest and most decisive. And one of the first results has been to show how intimately the social factor is involved, even on this elementary plane.

There is, for example, the well-known difficulty, at the threshold of the enquiry (as in the practical business of exploiting "natives" in the interest of European commerce and industry) of inducing the adult or adolescent "native" to give a fair trial to experiments which are beyond his social horizon; a difficulty not unknown to those at home who have encountered those obviously capable individuals who are also "bad examinees."

There is the further problem of eliminating the disturbing factor of an inadequate language. A Greek peasant, for example, can see scarlet and brown as different colours, but he has usually only one word, *kokkinò*, for all shades of red; on the other hand, his word for blue, *galanò*, only means sky-blue, and for all other shades he either uses comparisons, or says *blé*, accepting (as nearly as he can) the French word *bleu* from the commercial traveller who sells him ribbons or paper of that tint.

Further than this psychophysical work very little has been done. It would seem to be for the ethnologists, and especially for the "social anthropologists," to define much more clearly than hitherto what they mean by the more elementary terms in their vocabulary of characterisation, and for the psychologists to go a good deal further than hitherto in laboratory work on such complex manifestations as the "sense of right and wrong," irrespective of race or breed.

[Since this memorandum was written, the publication of Dr. A. A. Goldenweiser's "Early Civilisation" (London, Harrap, 1922) has put at our disposal a full, fresh and most suggestive review of the whole question, in the light mainly of experience among American "natives," and of the comparative treatment of these problems by an American school of ethnology which promises much, and has already achieved a good deal, that should be taken into careful account among ourselves.]

J. L. MYRES.

Britain: Archæology.

Moir and Barnes.

A Criticism of Mr. S. Hazzledine Warren's Views on Eoliths.

By J. Reid Moir and A. S. Barnes.

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Mr. Warren in his rejoinder (*MAN*, 51, June, 1923) to our criticisms (*MAN*, 32, April, 1923) has made no answer to any of the eight points which we then advanced against the validity of his views. He has, however, admitted that his use of the "watt" as a unit of kinetic energy is incorrect, and should be replaced by the "joule" in the various places in the text and tables of his paper (*Journ. Roy. Anthr. Inst.*, Vol. XLIV, pp. 412-50), in which this error occurs.

But this mistake cannot be regarded as an isolated instance of Mr. Warren's lack of knowledge of fundamentals. In the same paper we read, on p. 435, in relation to the kilogram, or pound, as units of mass, that, "strictly speaking these "units of mass are only accurate so long as the force of gravity remains constant, "which for our present purpose we may assume." The fact, of course, is that the mass of one pound, or of one kilogramme, is a constant quantity of matter which is quite independent of gravity. Mr. Warren's knowledge of mathematics is on no more secure foundation than that upon which his knowledge of mechanics reposes. He sets out in Table IV (p. 440), *loc. cit.*, a series of figures under the heading "Ratio of Pressure," and another series under the heading "Ratio of size of "chip." We desire to point out that a "ratio" is a relationship between one quantity and another, and manifestly the term ratio cannot be applied to a single quantity: on p. 438, Mr. Warren states that certain results are "arranged in the geometrical "progression of 1.5." Again we must inform him that a series, like a ratio, cannot apply to a single figure. On p. 436, Mr. Warren speaks of "a moving body "striking with a force of 10 kilogrammetres." The unit of force is the dyne, the poundal, the kilogramme, or the pound weight; the kilogrammeter being a unit of work.

It is upon a lack of knowledge of this kind that Mr. Warren bases his "theory," but, in order to enunciate it, the figures must be manipulated. He thus

describes the process (p. 436) "in dealing with a considerable number of experiments, I have taken the average maximum of the effects. By this means the accidental association of unfavourable conditions is eliminated and the results of the accidental association of favourable conditions are brought together under the various forces used. There was some difficulty in obtaining a just average thus an actual average of the results would have been too low, as a fair average, while the 'estimated favourable result,' represents a nearer approximation to that which it professes to be."

It is impossible to comment upon a theory based upon data manipulated in this manner.

Mr. Warren attempts to answer our criticisms by a *tu quoque* argument, and, in a footnote, he gives a list of what appear to him to be errors committed by one of us. He cites a pressure of 300 tons to the square inch which one of us obtained in a differential screw press. Such a pressure is in no way remarkable, and was certainly obtained. Why should Mr. Warren query it, unless he is mixing up total force with pressure? He is incredulous, also, about the lateral distribution of pressure in sand, indeed he has told us in his paper (Table VI, p. 444), *loc. cit.*, that he has calculated sub-soil pressures upon stones at various depths, "from the average weights of different soils, the area of the stones (whatever that may mean), and their depths beneath the surface." These calculations are incorrect.

If Mr. Warren wishes to put his convictions to the test, let him try the following experiment. Obtain a piece of iron pipe, about a foot long and an inch in internal diameter, and fasten it securely, with its long axis vertical, to some suitable support. Over the orifice at the lower end of the pipe tie a single cigarette paper, as one would tie a paper cover over a jam jar. Pour fine, dry, sand into the pipe to a depth of two or three inches, and into the top end of the pipe insert the stem of a tee-shaped piece of metal. The stem of the tee-piece should be about 12 inches long and rather less than an inch in diameter, so that it will slide freely in the pipe as a plunger and rest upon the sand. If Mr. Warren will then apply his whole weight to the cross-arm of the tee-piece, he will be convinced in a very practical manner of the truth of our contention. According to him, the pressure will be transmitted from the end of the plunger, vertically downward through the sand to the cigarette paper which supports it. The paper would therefore break. He will find, however, that this is not the case, as the pressure is transmitted laterally by the sand to the sides of the tube, while the cigarette paper remains unbroken. The remaining items mentioned by Mr. Warren in his footnote have been dealt with by one of us in (*MAN* 12, 1919), and in *Proc. Prehis. Soc. E. Anglia*, Vol. I, 1912, p. 183, to which the reader is referred.

Mr. Warren contemplates dealing elsewhere with our strictures on his "planes of least resistance," and we await the publication of his views.

On the question of scientific method, Mr. Warren does not appreciate that experiments need to be conducted in such a way that only one condition varies at a time; by including, as he does, a number of variables at one time his results are rendered worthless. He claims that he has made a number of discoveries in connection with flint flaking. We must confess that we do not know of a single new fact relating to the fracture of flint which has been discovered by Mr. Warren. He adduces certain facts which have been common knowledge for many years, together with a confused mass of experimental data obtained under conditions which render them useless from a scientific point of view—and of fallacious conclusions based upon these data.

In conclusion, we wish to state that, in our criticisms of Mr. Warren's views and errors, we are animated by no personal feelings against him, but we are determined to discredit the erroneous and misleading theories which he

enunciates. If Mr. Warren doubts our freedom from bias in this matter let him refer his papers on flint fracture to assessors nominated by the editor of MAN, to scrutinise and to report on them.

A. S. BARNES.

J. REID MOIR.

Africa, South : Ethnography.

Norton.

Plants of Bechwanaland. By the Rev. Professor W. A. Norton,
M.A., B.Litt.

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African native research, even on the philological side, will be found to have a value not only for itself, but also for the more popular sciences. Botanical studies, for example, would certainly gain very much if carried out with knowledge of the native languages. In Bechwanaland I found an extraordinary knowledge of plant life and lore even among the school-children, and was able in a single morning, with their help, to collect nearly a hundred specimens.

Consideration of native lore in regard to plants should be of value not only to the philologist and anthropologist, but also to the medical man, the student of toxicology and to the economist and agriculturalist.

I beg to acknowledge the kind help received from the Bolus Herbarium, Arch-deacon Rogers, Dr. Stoneman, Dr. Sim, Miss Stent, and the staff of the Mochudi Dutch Mission and school. Doubtless mistakes will be found below, which the writer will be glad to have corrected; the Herbarium found the specimens in some cases insufficient.

E denotes Endemann's "Sotho-Wörterbuch." Pronounce every *ng* as in *sing* and *g* as in Cape Dutch. *E*'s and *O*'s, the values of which need to be carefully marked, are to be pronounced *broad* when in capital type. I have not thought it necessary to repeat the frequent *le* and *mo* prefixes. *C* denotes Engl. *ch*. *Ch* = the same aspirated.

bogOkwe.

b[o]yang, grass.

le(ma)bowane.

..fatlha, treewool shrub (*E*).

..fEtlho, top part of mealiecob.

..kgoroko, *Euclea*. Also lefatlana.

..kgorokgoro. mokgorokgorong is mofoko, acc. to *E*.

..ngana, *Indigofera cryptantha*, purgative, bush of mongana, q.v.

..rutla, *Triumfetta*.

..tlonola, *Mundulea*.

..tlaywa, *Royena pallida*, bush of motlaywa,

kgobati, fig-bast.

kgOpO : kgopu : calabash.

dikweneng, tea of Bechwana.

mabatsane, stinging fruit of *Tragia* : from baba, to itch. Suto bobatsi has stinging leaves.

matolantswe, *Ficus*, not eatable : red when ripe.

maboaneng : *E*, moboaneng, hemp.

magonotwane, small strong tobacco.

maletswa : leletswa has birdlime in berry. *Corygonium atriplicifolium*.

maisagotlhe.

makanagwane, like tshetlho but bigger.

mhatlha, wild woolbush (mofatlha).

mha (mfaa), wild fig : fruit edible in spring.

mhafu, yellow waitabit.

mhetola, *E gerberfarn* : thick red root.

mmabi : thorny; also from baba.

mmilo, wild fruit edible in spring. *E*, mispelbaum, from bila, bring ill-luck :

Zulu umvilo : *Vangueria*.

mmilo-rotswana, same shape as mmilo.

mmopo, maize.

mmOpyane, a spring fruit, *Odina*.

mmopudu, edible spring fruit, *Chrysophyllum*.

mochOtlhO, edible : from chOtlha, to chew. ;

mocotware, *Rhus*.

mogalabe.

moga : pods of 6 ins., feathery leaf.

mogoane, willowlike, useful for sticks : bears yellow flat berries in clusters ; spring fruit edible.

mogokare, a willow growing wild by Caledon Rr., which is called after it.

..godiri, at the riverside, edible at Christmas. *E* mogodire, rooibosch.

..goleri, *Rhus*.

..goma, *E* klettengras, *pupalia lappacea*. Named from sticking fast.

..gOnOnO, *Terminalia sericea*, for rafters : fruit not edible.

..kalabata, hakedoornbush, *Zizyphus mucronata* : fruit edible.

..kgalo, waitabit thorn, fruit bitter, edible : also *Ziz. mucr.* Sekgalo, small species, sweet and edible.

..kgalotshe, very small thornbush, like above.

..kgwa, thornbush, acacia.

..kgwana.

..kankele, edible wild fruit.

..kgwelekgwele, *Terminalia sericea*.

..kgOpa, aloe.

..kgofe, *Grewia discolor*.

..kgompata, *Odina* : edible.

..kgwEre—kgwEre, *Euclea*, ? mokgerekgere.

..khukhane, *Anaphrenium*, small black berries.

..kokwele, small edible autumn fruit.

..kaikai in Tvl. *E* blackberry.

..koba. mokokonane. mokukukwana.

..ku, v. mositsane.

..kOsho, on Limpopo.

..kura.

..dikasope ; leaves for medicine.

..loga, *Croton gratissimum*.

..lOtO, for hedges.

..dube, shady.

..nkgalane.

..nato for spokes : *Sclerocarya caffra*.

..nwane, autumn edible fruit.

..ngana, *E* knoopjedoorn, with hooks.

..nga, waitabit, *Acacia detinens*.

..Oka, thornlike mimosa.

..ologa, with silver leaves, *Croton gratissimum*.

..Omani, used for sticks.

..pengwe-eng, fruit edible in spring.

..pipi, evergreen, shady : fruit edible in spring : *boscia*.

..rala, *Commiphora*, used for spoons ; fruit not edible.

..rekhure, stinkwood.

- ..retl[w]a, wild currant bush, *Grewia cana*: edible fruit, ripe Nov.
 ..rObe, a good wood: edible fruit.
 ..rOka, wild evergreen, *Commiphora abyssinica*.
 ..rokolo, wild fruit tree, *Ximenia caffra*; chiSwina munengeni, bitter fruit.
 ..rotologa-kgomo, wild thorny fruit tree.
 ..rotonoga, *Bridelia*.
 ..rotologa-podi, small variety of above.
 ..rula, *Commiphora abyssinica*, edible fruit with acid taste: wood used for spoons, dishes, seats, kikas (mortars for grinding corn).
 ..rulana, small green stone fruit in bunches. Serena-boom, Dim. of above.
 ..rOla.
 ..rulala-tladi.
 ..rutlhwane.
 ..sithwasithwane.
 ..sala-osi, berries in clusters. "If by your house, your family will die, and you remain alone!"
 ..sElesEle, *Elephantorrhiza*.
 ..setlha, *Peltophorum africanum*. In chiSwina musasa ("shelter").
 ..silabele, edible fruit like sorghum, but with stone. Bakgatla say moshabele; Basuto, tshilabele.
 ..shaoka.
 ..siea-pelo, wild fruit tree.
 ..sitsane, *Elephantorrhiza*, for tanning, cf. black wattle: used as coffee. Large brown pod 5 ins. long, and large brown beans within. Sometimes called moku, v.s.
 ..sOkela-sebeng, *Sansevieria*, medicine for ear-ache, as its name implies ("twist in ear").
 ..sitlwane, *Asparagus stilupaceus*.
 ..mosu, mimosa, *Acacia*, chiSwina mumu-nzwa (cf. ame-va, thorns, things you feel).
 ..sukubyane, medicine for fever, *Lantana salvifolia*. The leaves are infused like bluegum, and inhaled, or taken as tea, with sugar.
 ..tantanyane, white flower: creeper.
 ..thepe, a wild vetch.
 ..thuba-tshipi ("break-iron," hard).
 ..tlhaka, *Mariscus*, sedge for mats. Zulu tsenga = strainer.
 ..t[l]hats[w]a, ficus, eatable when ripe and red.
 ..tlhaba-kolobe ("stick-pig"), *Xanthium spinosum*: Xosa itsungu.
 ..tlhaywa, v. letlh.
 ..tlhatsa, *Croton gratissimum*.
 ..tlhono, *Gymnosporia buxifolia*.
 ..tlopi, for spoons: fruit edible.
 ..tswala-kgoro: edible fruit, stone for beads: yellow flowers.
 ..tswere, for firewood and wagon-axles, *Combretum primigenum*.
 ..tsotsobyane, wild fruit tree.
 ..tubane.
 nchwe ea badisa ("ostrich of the herders," because of its tuft). Phatane, phohu, rerepe.
 rothwe, *cynandropsis pentaphylla*, used as a vegetable, like spinach.
 sephodise, *Alternanthera achyrantha*, introduced by the police at Gaborones from overseas, then at Mochudi by their horses.
 ..bebe
 ..kengkeng, from kena, to enter, because mixed with snuff.
 ..kgola, *Jatropha*; sekhi, inedible; serite, a grass.

..repe : its ashes mixed with tobacco, v. thepe.

..retonoga, cp. morotonoga.

..Jaole : fruit edible in spring : small red buds.

..monamone, sagelike shrub. *E semonye* and *sethwanye*. *E*, edible fig, ripe in Feb. thola-kgomo, *Solanum* : violet flower, bella donna : infusion for colds, coughs and pimples, also for internal measles. The root is ground up for bandaging wounds ; it stops their bleeding at once.

thola-podi (morulana, q.v.). It is poisonous to a wound on a finger squeezing it. Goats eat the bitter winter fruit : used for curdling goats' milk without souring (so is thola-kgomo, and also for cow's milk, but takes longer) ; tlowa is the whey.

tshEtlhO, *Tribulus terrestris*, gives dikkop to sheep, esp. merinos, owing to a worm in the stem, but only when in limestone soil : in sandy soil it can be eaten.

So, at least, the natives say. Cp. tshetlha, yellow.

torOko from *Turks-Feig Opuntia*, prickly pear. In Xosa *iToloFiya*, Suto *DoroFia*.

thepe, a morogo, wild vetch, *Amaranthus* or *Alteranthera*.

tlhatshane.

thota-madi.

thotwana-e-kgolo, *Withania*.

W. A. NORTON.

ADDENDUM.

The following are native names of plants collected at the Victoria Falls. In this list the letters *ng* are pronounced separately (*ñg*) : *ñ* denotes *ng* in *sing*. SeRozwe names are asterisked : sikololo names marked †.

matengenyha	Katondo*	seTebele izala,	Tambuti grass,	Cymbopogon.
buowani†	grass	Teb. uqufuu		Sorghum sudanense.
windo				Verbenacea.
ndilongo.				Leguminosa.
nasilolo.				Vernonia.
sinoka			purple	Senecio.
		Teb. matamatisi (= tomatoes !)		Solanacea.
kangungu				Labiata ?Moschosma.
sitongwane*				Polygonacea.
kathola*	grass			Leonotis.
limbembo*	grass			Composita, Chicoracea.
kabumboeloi		Teb. itawane		Commelina.
ndulwete*		Teb. ntandanyane		Solanacea.
kapusepuse†,	siNkoya kaminda,	Teb. movio		Cucurbitacea.
ngulu,	Nk.kandoro, in Tonga mbokoma :			Impomoea.
matadi†	Nk.mabidze.			Labiata.
motata†				Ficus heerea.
mosholosholo,	love beans.			Abrus precatorius.
mokononga,	with big branches.			Composita.
mokOna,	feathery with little thorns.			Acacia.
? mokaratongo,	small, sage green.			Triumfetta.
mataka†	with a fuzzy head.			
aiOba,	long wiry stem.			
mobabani†				
mosasa,	small edible fruit.			
damba				
mosavai.				
mosikisi,	small leaf, dark in front.			
luthende,	triple leaf, light green.			

mtubutubu

mokosi*

mogowana

Strychnos spinosa is msele in xiRonga and maholoholo in the Quilimane dialect.

Acacia.

Brachystegia.

Garcinia.

N.B. Where I have no identification to offer, I still insert the native name, in hope of its being identified by others.

Obituary.

Fallaise.

Adela C. Breton. *By E. N. Fallaise.*

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By the death of Miss A. C. Breton on June 15th, at the age of seventy-three, the study of American Archæology loses one of its most devoted supporters in this country. Last year, Miss Breton, notwithstanding the fact that she was in indifferent health, felt it incumbent upon her as a matter of duty to attend the Congress of Americanists which was held at Rio de Janeiro in August. She was taken ill on landing and was unable to leave Brazil before Christmas. Her intention was to return home by way of the West Indies, Canada and Portugal, but increasing weakness prevented her from continuing her journey beyond Barbadoes, where she died.

Miss Breton had travelled extensively and had visited and studied the antiquities of many countries. A skilled artist in water-colour, with a trained and keenly appreciative eye for beauty, whether in nature or in art, she made good use of her gifts in archæological investigation. While in Japan she made a careful study of the temples in a series of large water-colour drawings; but her most considerable and valuable contribution to archæology in this direction consisted of the records of the mural paintings of Chichen Itza in Yucatan, which she copied while camping out alone for some weeks in a ruined temple. This work was undertaken at the suggestion of Dr. Maudslay, whom Miss Breton had consulted after an expedition to Mexico had inspired her with a desire to study the antiquities of Central America. It was also at the request of Dr. Maudslay, to whom I am indebted for these particulars, that she undertook to make copies of the large pre-Columbian plan, on maguey paper, of part of the city of Mexico, now preserved in the National Museum—a work of which the successful accomplishment required long familiarity with Mexican picture-writing and topography—and of the first Spanish map of the Valley of Mexico by Alonso de Santa Cruz, now in the Library of the University of Upsala. Both these copies, which have been highly praised for their beauty and accuracy, were reproduced in Dr. Maudslay's translation of "The True History of the Conquest of New Spain," by Bernal Diaz del Castillo, published by the Hakluyt Society. Miss Breton was the author of a number of articles and papers on the archæology of Mexico and Central America and was also a frequent contributor on a variety of archæological subjects to the pages of MAN.



An accomplished linguist, Miss Breton was at home in many countries; France, Spain, Italy, the Mediterranean, Hungary, Sweden, the Far East, had all been visited by her and she had spent much time in North, Central and South America; North-West Canada and Colorado, were equally familiar to her. Mexico and Central America she had visited thirteen times. In her early expeditions to this region she travelled on horseback over a country which more often than not was roadless, accompanied only by one Indian, who was devoted to her. The letters she wrote at the time, some of which I had the privilege of reading shortly before she left England last year, furnished ample evidence of the discomforts, not to say hardships, which she had to endure on these expeditions, and of the indomitable courage and never-failing sense of humour with which she met them. Her courage, indeed, and the spirit which nerved her to make repeated calls upon a store of nervous energy already taxed to the full in the interest of the studies to which she was devoted, were among her more striking characteristics.

Miss Breton was a frequent attendant at the more important congresses connected with archaeological studies. In 1914 she visited Australia with the British Association and in 1921 she, with Mr. Burkitt, represented the Royal Anthropological Institute at the International Prehistoric Congress at Liège. She was most closely connected, however, with the International Congress of Americanists, the meetings of which she attended regularly, taking a prominent and important part in the conduct of their business. She was very largely responsible for the organisation of the meeting of the Congress which took place in London in 1912, the heavy secretarial work both before and during the meeting falling almost entirely upon her shoulders. The volume of Proceedings issued subsequently was also edited by her.

Of Miss Breton's personal charm, and of the many delightful qualities she displayed in her correspondence with her friends, this is not the place to speak. Her enthusiasm for the study of anthropology and in particular for the Royal Anthropological Institute, of which she was always ready to further the interests by any means that lay within her power, renders her death a serious loss to science.

E. N. FALLAIZE.

REVIEWS.

Bibliography.

Penzer.

An Annotated Bibliography of Sir Richard Francis Burton, K.C.M.G. 77
By Norman M. Penzer, M.A., F.R.G.S., F.G.S. Preface by F. Grenfell
Baker, M.R.C.S., L.R.C.P. London: A. M. Philpot, Ltd. 1923. Pp. xvi + 351.
Illustrated by 24 plates. 24 x 18 cm. Price, £3 3s.

Mr. Baker, who vouches for Mr. Penzer's exceptional qualifications for the task he has undertaken, was the travelling medical adviser and daily companion of Sir Richard Burton during the last 3½ years of his life, and the preface to this volume contains some interesting observations as to his method of writing and his literary style. Mr. Baker is also the last survivor of the friends who were with Burton when he died in 1890, and is the founder of the Burton Memorial Fund.

Mr. Penzer is the joint secretary of that Fund; and it may be said that in the labour of love which he had devoted to the compilation of this bibliography he has himself created an enduring memorial of his subject. When we consider the variety of the topics on which Burton wrote and of the methods by which his works were given publicity, as well as the unfortunate fate which awaited some of his writings, we understand the difficulty of the task Mr. Penzer has undertaken, and we applaud the success with which he has performed it.

When Burton joined the Ethnological Society of London in 1861, and contributed to it his notes on Du Chaillu, he was already the author of many works, including the Pilgrimage to El Medinah and Meccah, the exploration of Harar, and the

account of the Lake Regions of Central Africa, and had been awarded the Gold Medal of the Royal Geographical Society.

When Dr. James Hunt founded the Anthropological Society of London in 1863, Burton became one of his earliest and most active supporters, and was its first President. Mr. Penzer gives full details of his numerous communications to that Society, and to the *Anthropological Review*, which was not in strictness an issue of that Society, as Mr. Penzer puts it, but was a publication for which Dr. Hunt was individually responsible.

The same impulse which led Burton to describe the Anthropological Society of London as "the refuge of destitute Truth," led to his taking part with Dr. Charnock and the other seceders from our Institute in 1873 in the formation of the London Anthropological Society. His statement of his views on this occasion as given in *Anthropologia* may also serve as an indication of his purpose in some of his later publications. He wrote: "The explorer and traveller's chief want is some journal in which he can discuss those highly interesting social problems, physiological details, and questions of religion and morality which are judged unfit for a book addressed to the general public." The new Society, however, had only a brief existence, and in subsequent years Burton contributed papers to the journal of the Institute.

Mr. Penzer has devoted much labour and research to the later publications in question. He has described every form in which they have been issued, and recorded the prices realised for them at sales by auction, and also the prices at which they have been offered in catalogues by booksellers. These present some curious contrasts.

In appendices are given a description of the Burton books at the Central Library at Kensington, and of the Burton relics at the Library in Camberwell—a criticism of the "Lives" of Burton, which appear for the most part to be unsatisfactory; and some interesting particulars of the life of Albert Letchford, the artist who illustrated "The Book of the Thousand Nights and a Night."

Lady Burton's action in burning an unfinished MS. of her husband's after his death raised a great outcry at the time. Mr. Penzer says, truly, that it is most dangerous and wrong to burn unpublished MSS. of an author, even if the person "doing so be the man's own wife"; but, after all, considering that there were two editions of "The Perfumed Garden" in existence, the only things of possible value that were lost to us by her deed are the additional notes which Burton had added in preparing the third edition; and her sin was really prompted by a mistaken impulse of loyalty to the memory of a husband she greatly admired and loved. E. W. B.

Africa, West: Linguistics.

A Practical Hausa Grammar. By F. W. Taylor. Clarendon Press, 1923. 7s. 6d. net.

Taylor

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There is still much to be learnt of Hausa both in grammar and phonetics and this work has novel information on both. Mr. Taylor gives for the first time an account of tones, first mentioned by Schön sixty years ago, but unhappily it is not easy to follow, as we are not told what is the second component of the falling and the two rising tones. The transliteration also leaves something to be desired; thus, a dot under a consonant is used in two cases (b, d) to indicate a glottal stop, while in the case of *k* it connotes both the presence of the glottal stop and a difference in articulation which, for Mr. Taylor, is "the voiceless counterpart of the Arabic voiced *qaf*": in point of fact *qaf* is not voiced; if Mr. Taylor's identification, which does not agree with his method of articulating, is correct, the proper symbol is *q*.

His claim to have used a phonetic transliteration is only partially justified as he thinks that a practical manual for the student should not be made illegible

by too numerous signs. The real question at issue is whether the student is to read the text as it is printed or find out for himself how many varieties of sound exist and where they appear. Yet, in his preface Mr. Taylor claims to have made a scientific analysis of the sounds.

The account of *f* is wholly misleading; it is termed an "implosive," which should mean that the breath is indrawn; some people are said to use a fricative instead, *p*, but this is not a fricative, whereas *f* is; *p* is, of course, a plosive. If Mr. Taylor thinks a scientific transcription too burdensome for his readers, it is unwise to use technical terms which they will not, presumably, understand; but to use such terms in wholly erroneous senses is to invite disaster.

The author also claims to have discovered a construct state in Hausa and describes it as the form taken by a noun on which a genitive depends; but (a) it is not used in such cases as *mabada hali*, "the giver of character"; (b) it is used in such cases as *kawo kudin*, "bring the money," where there is no genitive and the noun in the supposed construct state is the object of a verb; and in *sun sa a wurin*, "they have put them in place," where there is no personal pronoun expressed.

On the whole, however, Mr. Taylor may be congratulated on his effort to further Hausa studies and will doubtless have much more to tell us in the future. N. W. T.

ANTHROPOLOGICAL NOTES.

Oxford University Anthropological Society.—The following papers have been read during the Trinity Term:—10th May: Mr. J. Reid Moir, "The Flint Implements of Cromer, Norfolk"; May 24: Miss Joan Evans, "Magical Jewels of the Middle Ages"; 7th June: Mr. Henry Balfour, "Three Months in the Naga Hills, Assam." 79

Bristol University Spelæological Society.—No. 3 of Vol. 1 of the *Proceedings*, which has just been issued, bears witness to the well-directed activity of this Society. It contains a second report on the excavations of Aveline's Hole by Mr. J. A. Davies. Owing to the nature of the material in which the work has been carried on during the last year, the discovery of artifacts has been infrequent. A few bone implements, gravette and Chatelperron points, a microlithic knife, gratoir, flakes, etc., have been obtained. There appears to be no reason to modify the view previously held that the stone culture is a direct continuation of the late Aurignacian or, perhaps, a transition to Tardenoisian. Mr. Tratman writes on the human teeth found, some of which are carious. Among other contributors, Mr. Palmer writes on the stratigraphical position of the transitional culture in the south and south-west of England; Mr. Taylor contributes a second report on Rowborrow Cavern, and Mr. Langford reports on work in Read's Cavern (Keltic Cavern). Copies of the report may be obtained from the Honorary Secretary, at the University, from whom also may be obtained particulars of the Summer Camp at Burrington Combe, which is being held by the Society from 24th July to 8th August, for the purpose of visiting and exploring the caves upon which the Society is working.

Bronze Age Burial near Brough.—The *Yorkshire Post* of 2nd July contains an account of the discovery of an interment of the remains of a child, at Mill Hill, Ellington, near Brough. The head was bent back upon the vertebræ, the knees drawn up to the chest, and the body on its left side. An elaborately decorated earthenware vessel which lay at the head and another at the feet showed characteristic zig-zag ornament. The teeth suggest that the age of the child was ten to twelve years. The bones were removed under the supervision of Mr. T. Sheppard, of the Hull Museum. A small bronze bracelet was found by one of the workmen. Fragments of a bronze-age beaker, neolithic implements, and Roman pottery have previously been found on this site.



STONE RELIEF IN GRÆCO-BUDDHIST STYLE FROM NORTH-WEST INDIA.

ORIGINAL ARTICLES.

With Plate K.

India: Archæology.

Joyce.

Note on a Stone Relief in Græco-Buddhist Style from North-west India recently acquired by the British Museum. By T. A. Joyce, **80**
M.A., O.B.E.

The object of this note is to place on record a stone Græco-Buddhist relief, recently acquired by the British Museum, which illustrates an incident in the life of Buddha not often represented in the sculptures. The carving, which is in the Gandhāra style of the first and second centuries A.D., measures 21 by 15½ inches (*maxima*), and the legend to which it refers is the following. At one time, when Buddha was residing in the Bamboo Grove in the neighbourhood of Rājagriha, he started out as usual one morning to collect alms in the town. As he passed along the road he approached two small boys who were playing at building houses in the dust. These were named Jaya and Vijaya, the former of noble blood and the latter of good family. Jaya said: "Here is a holy man, I will give him some flour," at the same time holding out his hands filled with dust. Buddha, perceiving the spirit which prompted the action, gravely proffered his bowl and received the offering. In the relief under discussion, Buddha is easily recognisable in the centre; to the right are Jaya and Vijaya, in front of a house with a balcony on which stand two women, possibly their mothers.

Another relief illustrating this incident is preserved in the Calcutta Museum, and is illustrated by Foucher in "*L'Art Gréco-Bouddhique de Gandhāra*," Tom. I, p. 517, but the carving has been much mutilated.

According to legend, the pious Jaya was destined to become, in another incarnation, the great Buddhist ruler Aśoka. T. A. JOYCE.

Egypt: Archæology, Physical Anthropology. Murray and Derry.

A Pre-Dynastic Burial on the Red Sea Coast of Egypt. By **81**
G. W. Murray and D. E. Derry, M.D.

During a recent expedition to the Red Sea coast of Egypt, my attention was called last February by my hunter to a recently-plundered grave about 5 miles inland and due west of the headland of Ras Samadai, in Lat. 24° 59' N. This grave was on a terrace in a small tributary of the Wadi Samadai, and, except for a single grave of modern appearance beside it, entirely isolated. It was surrounded by the usual ring of large stones which characterises almost all pre-Muhammadian graves in the Eastern Desert; and its outline was roughly circular with a depth of only 3 feet. The small dimensions of the hole showed that the body as it lay in the grave must have been flexed, but, owing to the disturbance of all the contents by the plunderers, it was impossible to say where the head had been, or on what side the body had lain. My field diagnosis of the contents as Pre-Dynastic in culture has since received confirmation from no less an authority than that of Professor G. A. Reisner, who has been good enough to look over the following notes. The grave contained:

1. The skull and portion of the lower jaw (*described in detail below by Dr. D. E. Derry*).

2. Remains of what I took to be a leather water-skin, but so decomposed as not to be worth removal.

3. A rectangular slate palette with green malachite stains; also some loose green malachite powder. This alone seemed conclusive evidence of the Pre-Dynastic or Proto-Dynastic culture.

4. Fragments of a large grey coarse earthenware pot of a type which Professor Reisner dates as not later than the First Dynasty, not earlier than the late Pre-Dynastic period.

5. A smooth quartz pebble used for grinding the malachite on the slate palette.

6. Fragments of a tortoise-shell armlet.

7. Shells pierced for threading up as a necklace.

8. A bone awl.

9. A triangular sharp-pointed fragment of quartz crystal with a worked point. About 8 mm. to each side. Possibly a borer.

10. A wooden spoon (?).

The frequent discoveries of Red Sea shells in the riverain burials both at Naqada and Ballas and in Lower Nubia have always led one to assume a close connection between the Nile Valley population and that of the coast from Pre-Dynastic times onwards. It would also appear a fair assumption that the use of malachite as a face powder, so characteristic of the Pre-Dynastic culture, had its origin not among a people living in the Nile Valley, where the occurrence of copper ore of any sort is unknown, but among the tribes of the desert, where malachite, though rare, is procurable. So much we knew already. Now comes this burial to help us along another stage towards confirmation of the suggestion put forward by Professor C. G. Seligman (*J.R.A.I.*, Vol. XLIII, p. 682) that the present Hamites of the Anglo-Egyptian Sudan, who present such a remarkable physical resemblance to the Proto-Egyptians, "either represent descendants of that stock which gave rise to the Proto-Egyptians or have been permeated by its influence."

G. W. MURRAY.

The skull belonged to a man well advanced in years, and of a very primitive type. It is small and ill-filled. The forehead is low and sloping and the lateral aspects of the frontal bone are markedly flattened. This flattening extends on to the parietal bones and thus gives an appearance of undue prominence to the parietal eminences, behind which again the sides of the skull fall rapidly away to the occipital area, which is small and prominent. (See Fig. 1.) The coronal and sagittal sutures are entirely closed and almost obliterated. The lambdoid sutures are open throughout. The superciliary arches are feebly developed, but are replaced by a well-marked glabellar prominence, effacing the depression usually seen between the arches. There is a deep hollowing in the temporal region on each side, involving the great wing of the sphenoid and the epipteretic area, which is repeated as a slight bulging on the inner aspect of the cranial wall. The skull is of moderate length (185.5 mm.) but extremely narrow, measuring only 129.0 mm. over the apparently prominent parietal eminences. This



FIG. 1.

narrowness is characteristic of the Pre-Dynastic people, whose average breadth of skull for males is only 133.0 mm. The height (135.0 mm.) much exceeds the breadth, as is usual in the Pre-Dynastic Egyptians and primitive races generally.

Although the base of the skull is partly broken away, the cranial capacity was estimated by means of a gold-beater's skin balloon introduced into the skull and then gradually filled with water from a measuring glass. The mean of three determinations was 1192 c.c. This is probably not far from correct, and emphasises the smallness of this skull.

All the bones of the face are missing. Only the right half of the mandible was preserved, and of this a large part of the ramus is broken away. The teeth are well worn, and there is no caries. The chin is pointed but not very prominent. So far as they can be examined, the features of this skull accord well with those of the Pre-Dynastic Egyptians.

D E. DERRY.

Balkan Peninsula : Folklore.

Durham.

Some Balkan Remedies for Disease. By M. Edith Durham.

82

Albania.—There are still, in remote villages and among the mountain tribes, a good many local doctors famed for cures, who have usually inherited their lore from their ancestors. A knowledge of herbal remedies is boasted of by most of the old women. There is a proverb both in Montenegro and in North Albania : "Every herb has its disease; every disease has its herb." Besides the "cures" worked by these "regular practitioners," many are worked by spells and magic. The mysterious unknown has a powerful attraction for the human mind. So we find among the Christians a great belief in the efficacy of Moslem spells, and Moslems resort to Christian rites for a cure. The following are a few of the magic cures : When I was suffering from acute sciatica my old guide, Marko, tried hard to find the Moslem who had cured him of rheumatism some years previously. He described the cure thus. The magician collected a number of herbs, but kept secret what species they were. He made a fire in one of the usual braziers, muttered spells, and waved the herbs over it. He then instructed Marko to stand with his arms extended on either side. He placed the bunch of herbs on Marko's head and said : "Pain, pain, leave this man and go to the top of a high mountain, where there is neither man nor beast, and stay there." He then drew the herbs down the side of Marko's face, along his shoulder and the upper side of the outstretched arm to the finger tips, went back along under the arm, down the side to the toes. He performed a similar rite on the other side. Marko distinctly felt the pain leave him, and, as it has never come back, he naively supposed it was still on the mountain top. He assured me it had been intense—far worse than mine—for he had yelled continuously for several nights and days. Which I had not done. His distress at failing to find the man or even the species of herbs for me was touching.

Another Catholic Albanian told me he and his wife both suffered badly from rheumatism until a travelling Moslem, celebrated for cures, arrived and said he could cure them easily. He too prepared a brazier and said many spells over it. He then cut some hair from the crown of the head of each patient, and some from each armpit, and burnt it in the brazier, saying : "May the pain disappear as does this hair." And the pain obeyed and never came back.

Much illness is ascribed to the Evil Eye (Alb., *Syy i kech*) and also to the evil machinations of Vampires and *Shtrigas* (Alb., witches). A herbalist very properly at once recognises that these are not cases for him. "Some one has been looking at the patient," he says. "Why do you send for me? You must find who did the evil." The dealer in spells, on the other hand, is qualified to deal with any sort of illness. The grandchild of the hotel keeper at Scutari was suffering from jaundice. A Moslem magician volunteered to cure him. He selected a red rose in the garden and tied a piece of yellow wool round it. He tied a piece of red wool round the child. He muttered the necessary spells, and then said : "Yellow, yellow, go out of the child and into the rose. Red, red, go into the child." In a few days' time the rose withered and turned yellow, and the child resumed its natural colour. Old Marko did not approve of this remedy, and knew a better. You should catch a small fish, put it in a bucket of water, the patient must fix his eyes on it as it swims round and round. After a time the disease goes into the fish and it dies, and the patient recovers.

The plains west of Scutari, by the banks of the Bojana river, are so malarious that they are not habitable in many parts during the summer. In 1911-13, owing to the Albanian revolution and the Balkan War, large numbers of peasants were unable to return to the mountains, and were blocked in the malaria swamps with terrible consequences. Almost the whole population was struck down with a virulent form of the disease. When I went on relief work with quinine, I found the people trying to cure their greatly enlarged spleens by slowly roasting the spleen of a sheep at a fire, and muttering a spell which ordered their own spleens to diminish as that of the sheep shrivelled at the fire.

Epilepsy seemed to be not uncommon in the mountains. I saw several cases. A woman fell down suddenly one day in a fit, whereupon some men rushed up, and, telling me to get out of the way, fired their revolvers alongside of her head. This was to frighten out the evil spirit. As the fit soon passed off, they believed they had succeeded. Marko knew a certain cure, but very difficult to obtain. If you were lucky enough to see a snake swallowing a frog you must throw a black handkerchief over it. The frightened snake then disgorges the frog. Keep the handkerchief carefully, and when someone falls in a fit, throw it over him, and the disease similarly will be disgorged.

These are all the "magic" cures I came across. Perhaps we should include, as sympathetic magic, the wish of the people to kill a pelican and rub my leg with its fat when I had sciatica, because pelicans always get their feet wet and never have rheumatism. But I was already a patient in the Austrian hospital when the remedy was suggested, and the doctor hurt the feelings of the deputation who had come with the suggestion, by refusing it.

Herbal and other Remedies.—Other prescriptions brought me for sciatica were: (1) to beat the limb with stinging nettles; (2) to rub it with roasted onions boiled in oil (this I let them try and, in the form of gentle massage, it gave some relief); (3) they wanted to slaughter a sheep and wrap me in the raw hide. As I was paralysed with pain and quite helpless, they would have done this had not the Austrian doctor come to my rescue. In order to keep my spirits up crowds of neighbours flocked to see me. When I was almost in a state of collapse the cat jumped on my bad leg and hurt me horribly. The neighbours shouted: "Thank God! The cat has jumped on her. Now she will not die. The cat always knows!"

The reason for the raw sheep-hide treatment which is often used, is that the sheep eats all kinds of herbs, and their virtue will soak into the patient. But the Austrian doctor told me that he was called to see a man already moribund. The smell was terrible. It was midsummer and the patient had had a split black cat applied to his abdomen some ten days before.

When children are not well it is considered very good to wash them in a decoction of walnut leaves. It is only in case of illness that such a drastic remedy as a bath is resorted to.

For diarrhoea a decoction of oak bark is given.

For constipation they had no local remedy, and I was constantly asked on my travels for "English salts."

For enteric fever they had a horrible remedy. The excrement of a dog, which had been dropped on a stone and dried in the sun, was pounded up and given in water. I vainly tried to prevent the giving of this on one occasion. The dose had been prepared by the Catholic priest. Human excrement and water was given as an emetic. Mixed with rakia it was given to an habitual drunkard with the idea of curing him. But the experiment failed.

Intestinal worms are very common. A preparation of buckthorn is given. Strong decoctions of poppy seed are given in haphazard way to cause sleep, and a dose is often given every night to infants so that they shall not cry. In a

communal family, with 20 or 30 people sleeping in one room, a crying child would be a nuisance.

Children suffering from opium were often brought to the Austrian hospital. There is a very high death rate among children. If a woman can nurse her child to the time when the flocks give plenty of milk, it has a fair chance. If not, it is fed on parboiled maize flour and heavy maize bread, and in many cases dies. Many infants die before weaning, largely, I believe, for want of air. They are kept in a heavy wooden cradle. The mother's mother has to present the cradle cover. It is a thick woollen mat, and is bound with cords tightly over the cradle. Little air and no light can enter. I have seen babies blanched like a plant under a pot. The idea is to keep off the Evil Eye. So the more the child sickens, the more carefully it is kept covered. As only the strong survive, the toughness of the mature Albanian, and his great recuperative power, are not surprising. He does not suffer from shock, and is not so sensitive to pain as we English. A Shala man I knew came to me for "medicine," having come from the mountains on purpose. He had toothache and his face was very much swollen, which seemed to alarm him more than the pain. He had two very bad teeth. I told him to go to the Turkish dentist and have them out, and gave him the dentist's fee, four chereks. Next morning he came back triumphant to return to me one cherek. He thought it a pity to spend so much money on the dentist, so bought for three chereks a pair of dentistry forceps from a gipsy who made them. He then extracted his own teeth, and showed me how he managed to get a good wrench by sitting on the ground and getting his leg over his right arm! After this he set up as dentist in the mountains.

Wounds.—The mountain men were cleverer at treating wounds than disease. They had a traditional antiseptic method which was very successful. An old man who had learnt the art from his grandfather, explained it to me. A wound must never be touched with water. It must be thoroughly washed with rakia (local brandy distilled from grapes). He judged the state of a wound by smelling it carefully. When thoroughly washed out, he dressed it with an ointment made of white wax, olive oil, pine resin and a distillation of the bark of green elder twigs. If deep, he plugged it with wool soaked in the ointment. In hot weather he changed the dressing twice a day. And so long as the wound was foul, washed it out daily with rakia. He saved a leg (compound, comminuted fracture as result of horse kick) which the Turkish military doctor was going to amputate, and made a usable limb of it.

For "first aid" for a gunshot wound he recommended the white of an egg mixed with salt to be applied at once as temporary dressing. He also understood how to treat a fractured skull, remove the fragments of bone and replace them by a piece of bottle gourd dried hard. For apoplexy he bled, either with leeches or lancet. He had made his instruments himself, forceps, small knives, a small saw, and probe. Leeches are greatly used for headaches and inflammation.

Montenegro and Bosnia.—In the neighbourland of Montenegro there were already some Austrian and Russian-trained doctors practising, and less "home made" treatment. But from the older people I learnt a few remedies. The washing out of wounds with either rakia or wine was still practised, with the curious superstition that whichever you chose to have your wound washed with, that you must drink for the rest of your life. Mitar, my Montenegrin guide's elder brother, had been shot through the lungs in the Russo-Turkish War, 1877, and taken to a Russian field hospital. He was very bad, and his friends having no faith in the doctor, stole him from the hospital at night and poured rakia into his lungs through the wound, which was suppurating badly. He described how he had coughed rakia out of the holes and out of his mouth. He completely recovered. But he would

never touch wine, and was firmly convinced that he would drop down dead if he did so. He stuck to rakia. In the same village I learnt an infallible cure for pneumonia. Pound a dried gall bladder of a pig with some gunpowder and drink it mixed with rakia. Gunpowder and rakia was said to be a powerful cure for many things.

About 1860 there was a severe epidemic of cholera in Montenegro. It was customary to place a man in a field and to plough a circle round him to isolate him from the disease. But Mitar said it was not very successful. I was shown a rock with a hole in it through which children were passed at this date, for a similar purpose.

In the Tsrmitza valley I was told of a cure for hernia, performed by old women. The "wise woman" demanded a fee of twopence for each operation, and expected a gift of a cheese or some eggs. She had to know the name and address of the patient, but his presence was not necessary. She put some freshly drawn water into a metal, long-necked jug (ibrik) and set it to boil on the fire, saying: "Water, I call on you three times from Heaven to earth—let the bowel of Mr. 'X' return to its place," and she crossed the water three times. When it boiled she poured it at once into a metal shallow basin, repeated the above words, and then turned the ibrik upside down with its mouth in the water. As the ibrik cooled a certain amount of the water would rise up into the neck. The more the luckier—and so should Mr. "X's" bowel return to its place. The charm is repeated daily till relief is experienced. I was told that five or six women in Gluhidol practised this, and that Montenegrins afflicted abroad would write home to have the charm performed.

Montenegro, when I was there, was ravaged by tuberculosis. I gathered that it had been introduced comparatively recently, that is some 60 years ago, when Montenegrins began going out into the world. These mountain men going to towns at once caught the infection and came home to die. I heard very numerous tales to this effect. Once introduced, the disease spread far and wide, for whole families sleep together crowded into one room, and nowhere in the world, perhaps, is the habit of spitting so universal and so frequent. And since glass windows and iron stoves have been introduced to the country, there is no ventilation in the houses. I vainly strove to get the schoolmasters to stop spitting in the schools. They said: "It is our custom, and we always do."

They had no "remedy" for the disease. In Bosnia I heard of a grim one. Bury a bottle of wine in the grave of a person who has died of tuberculosis. Dig it up after seven years. All of his relatives who drink it will become immune.

In Bosnia, the remedy for a cough was to burn oakgalls and to breathe the smoke.

A popular dressing for a contused wound all through the districts I visited in Albania, Montenegro and Bosnia was pounded onions put on thickly. This certainly gives relief, and probably has some anodyne property. A universal cure for a scorpion bite was oil in which scorpions have been soaked in the sun. Marko always had a bottle of them in soak.

For dressing cuts and abrasions, olive oil in which pounded-up *hypericum perforatum* (St. John's wort) has been macerated in the sun, is largely used, and seems to have antiseptic properties.

Among the Albanian tribesmen I found an extraordinary belief. Life was supposed to depend upon the worm of life which lives in the ear. The wax is the excrement of the worm. This proves the worm exists. I was asked for advice about a child up at Shala which had earache. Its ears were quite full of dirt and wax, and one was fly-blown and had maggots in it. I told them to take the child to the Austrian hospital at Scutari next bazaar day, and wrote a note for the doctor.

Not knowing the superstition, I said the ears must be thoroughly washed out. At once they said: "But that will kill the worm." Old Marko believed firmly in the worm. Drowning the worm would kill the child, and it was not taken to hospital.

The above are some of the more remarkable of the facts which I gathered about the medical practice of the peasants.

M. EDITH DURHAM.

Britain: Archæology.

Armstrong.

Further Evidences of Maglemose Culture in East Yorkshire.

By A. Leslie Armstrong.

83

The exceptional scour of the tides on the Holderness coast, during the latter part of May, having resulted in the temporary removal of sand and shingle usually masking the remnants of the ancient mere bed at Skipsea, I was privileged to examine a considerable exposure of these lacustrine deposits, including the approximate point where the small Maglemose harpoon, recently figured in MAN,* was found lying in the silt beneath the skeleton of an elk.

This opportunity was seized to carry out limited excavations on the site, also to examine carefully the sections of the mere deposits still *in situ* in the cliff face, together with a reconnaissance of other peat beds exposed on the coast between Hornsea and Bridlington, work which resulted in the recovery of further important evidence of a phase of the Maglemose culture having existed in this part of Holderness.

Owing to the rapid erosion of the cliffs at Skipsea the section of peat exposed there has, during recent years, been greatly reduced and, at the present rate of destruction, will be entirely demolished in the near future.

The present exposure shows in a typical section:—

Humus	-	-	-	1 ft.
Clay	-	-	-	2 ft.
Peat, enclosing timber	{	4 ft. 5 in. to		
		5 ft. 6 in.		
Blue silt, enclosing shells and plant remains	-	-	-	9 in.
Boulder clay (above the beach level)	{	2 ft. 6 in. to		
		3 ft. 6 in.		

This represents the margin of the mere, which accounts for the remains of large trees and branches enclosed in the peat and for the shallow depth of the silt. The silt passes gradually into the boulder clay, but is distinguishable therefrom by its contained freshwater shells, twigs and plant remains. Near the central portion of the deposit the peat bed is over 6 ft. in thickness and neither the underlying silt nor the boulder clay were visible above the beach level during this visit.

The exposure on the foreshore consisted almost entirely of blue silt. Having been much eroded by wave action and the scour of sand and shingle, the depth

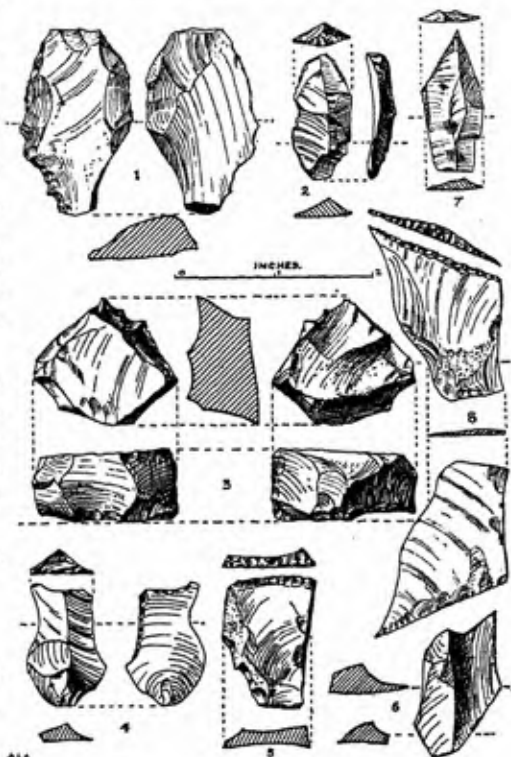


FIG. A.
IMPLEMENTS FROM THE SILT AND PEAT BEDS,
SKIPSEA, E. YORKS.

* MAN, 75, 1922; 81, 1923, Plate E, Fig. 3 and 3A.

varied from $1\frac{1}{2}$ to 3 ft. Of the overlying peat only fragmentary patches remained, a few inches in thickness. The whole of the silt appears to contain plant remains, nuts and freshwater shells, the abundance of which was demonstrated where the bed was eroded and channelled by the sea. It is of a dark grey-blue colour and of a greasy texture, most difficult to dig, and, when dug, can only be examined effectually by passing it through the fingers.

Actual artefacts recovered from the silt and peat by digging are eleven in number, of which six are figured. Those found in the silt are stained from black to greenish grey, those found in the peat are stained brown to yellow.

Fig. A 1.—Knife-like implement formed on a thick flake. Base boldly chipped on one side, probably to re-sharpen the edge. Edges trimmed all round, tang formed by steep chipping. Stained greenish grey to black. Found 6 in. above boulder clay, under 15 in. of silt.

Fig. A 2.—Ridged flake, forming a beaked scraper, or "strong point." Stained greenish black. Found 3 in. above boulder clay, under 2 ft. of silt. Compares with examples from Thatcham.*

Fig. A 3.—Core scraper, steeply trimmed and with one edge engrailed. Patinated dull grey. Found 3 in. in silt at its junction with peat.

Fig. A 4.—Ridged flake, forming end scraper on a blade. One edge neatly trimmed, probably for finger protection; blade edge shows signs of use, and steeply

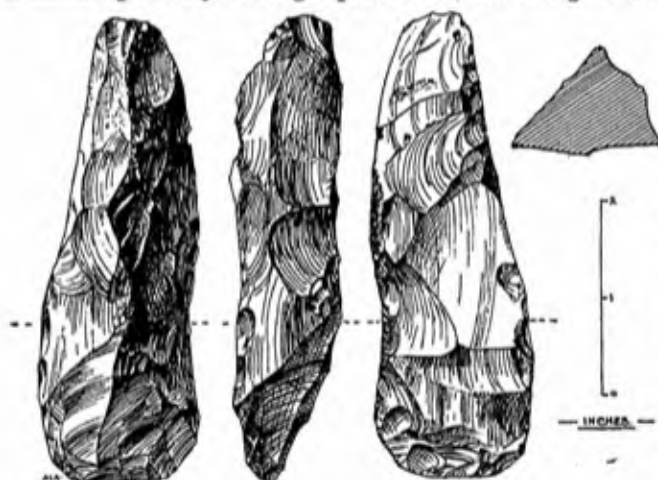


FIG. B.—IMPLEMENT OF MAGLEMOSE TYPE FROM PEAT BED, SKIPSEA, E. YORKS.

trimmed to form scraper with spur at corner. Stained brown. Found under 3 ft. of peat in the cliff section, 9 in. back from the face exposed before excavation.

Fig. A 5.—Scraper, characteristically formed on part of a thick flat flake. Finely trimmed at end and trimming carried slightly round one corner, remainder of flake rough and untrimmed. Stained and blotched dark brown. Found at junction of peat and silt in cliff, under

4 ft. of peat, 8 in. from face exposed before excavation. Similar in type and workmanship to scrapers contemporary with pygmy industries of Scunthorpe and S. Yorkshire.

Fig. A 6.—Piercer, trimmed on edges. Stained greenish grey to brown. Found under 9-in. bed of peat north of Barmston, after removing bed 12 ins. back from face originally exposed.

Figs. A 7 and A 8 are interesting specimens picked out from a box of local implements in the Morfitt collection. Both are blades with the end obliquely shouldered and trimmed by fine steep chipping. They are of characteristic type and similar to examples from Thatcham,† and Sværdborg, Denmark.‡ Both examples are labelled "Skipsea" and dated 1904 and 1906, and are said to have

* O. G. S. Crawford, *Proc. Prehist. Soc. E. Anglia*, III, 507, Fig. 4.

† Crawford, *ibid.*, 507, Fig. 4.

‡ Friis Johansen, "Mémoires de la Société des Antiquaires du Nord," Session 1918, 1919, pp. 241, 359, Figs. 18, 19 and 22.

been picked up on the beach opposite the peat beds. They are stained dark brown, which is consistent with their having been derived from the adjoining deposits.

Fig. B is a flint adze, or axe (the "herminette" of Sværdborg and Mullerup), which is in my possession, and was found some years ago at Skipsea after a fall of cliff containing large sections of the mere deposits, amongst which the axe was lying. It is stained yellowish brown through contact with the peat. The length is 5 ins., section triangular. Each face is boldly flaked, the broadest being flat for two-thirds of its length, then flaked obliquely towards the butt, which is narrow and thinned to an edge. The median ridge extends 3 ins. from the butt. The cutting edge suggests that of the tranchet axe in form, but is made by three bold flakes uniting at the median ridge. The edge itself is formed by secondary chipping and is straight for 1 in., the corners rounded. The most distinctive characteristics of the implement are its proto tranchet cutting edge and the extensive battering and bruising of the median ridge and side edges, apparently to improve the grip, or for hand protection. In this respect, and in general facies, the implement is similar to examples found at Sværdborg* and at Thatcham.† It is essentially Maglemosian in character and occurred in deposits of the same mere which yielded the small Maglemose harpoon figured recently in Plate E, Fig. 3 and 3A (MAN, 1923, 31), and is the implement which Mr. T. Sheppard, without having seen the axe, or any illustration of it, and without troubling to ascertain the facts respecting it, has stated in *The Naturalist*‡ "has no more bearing upon the date of the harpoons than has a threepenny piece found in the same area."

Fig. C is an example from the Morfitt collection, of similar character to Fig. B but with a rounded cutting edge and the long edges trimmed by steep chipping.

All the edges above the cutting edge are bruised and battered and the butt is chipped to an edge. It is stained dark brown by contact with peat and is marked "April 1906, Skipsea."

A small fluted core scraper (not figured) was found in a pocket eroded in the silt bed at Skipsea. It is of characteristic type and stained black, consistent with having been washed out of the silt, but its exact horizon could not be ascertained. A quartzite hammer stone, or pounder, abraded and battered at one end by use, was found at the base of the silt in proximity to Fig. A 2, and a thin quartzite flake showing signs of use as a scraper and recalling examples from Creswell Crags, occurred in the silt at a depth of 1 foot. A split quartz pebble of similar type to the latter, and a broken hammer stone, were recovered from the base of the peat north of Barmston, a few yards from Fig. A 6.

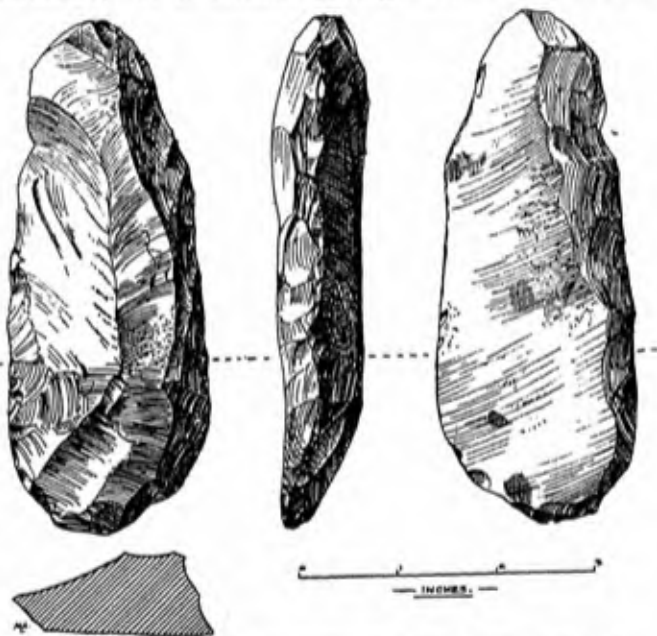


FIG. C.—IMPLEMENT OF MAGLEMOSIE TYPE FROM PEAT BED, SKIPSEA, E. YORCS.

* Johansen, *ibid.*

† Crawford, *ibid.*, Fig. 1.

‡ *The Naturalist*, 1923, 171.

It is significant that when placed side by side with a series of the usual East Yorks artefacts from the surface, these deeply stained examples from the silt and peat beds are as distinctive therefrom in type as they are in patination and that they can be paralleled in both patina and type only by certain implements of a dark brown and highly lustrous patina found upon one or two restricted areas in the vicinity of Skipsea and Atwick, upon elevated ground, which there is reason to believe represent former islands in the ancient marshland and sites of early occupation.

A. LESLIE ARMSTRONG.

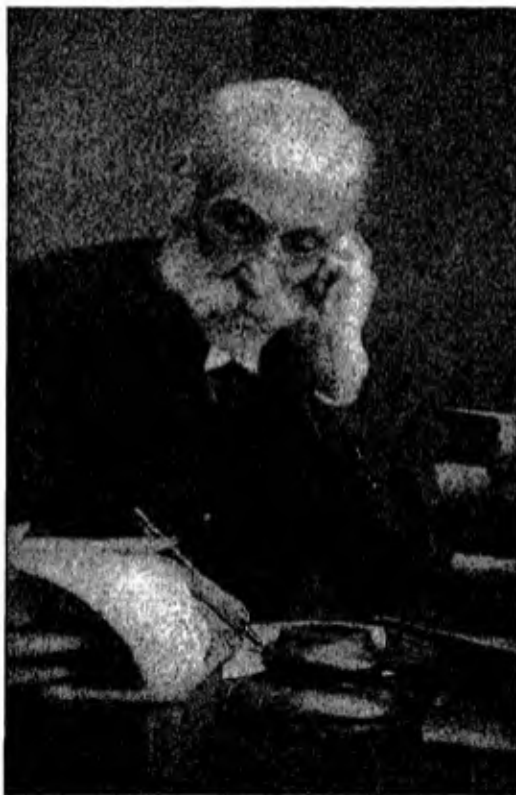
Obituary.

Boyd Dawkins.

Sir Henry Hoyle Howorth, K.C.I.E., D.C.L., F.R.S. By Professor Sir
William Boyd Dawkins, M.A., D.Sc., F.R.S.

84

The world is poorer by the loss of Sir Henry Howorth, whose death, at the age of eighty-one, took place on July 15th. He will be remembered not so much for the weight of his scientific knowledge as for his rare and attractive personality, and for his extraordinary mental activity which ranged far and wide and enriched his life and conversation with innumerable interests.



Howorth, who was born at Lisbon in 1842, came of an old Lancashire family. He was educated at Rossall School, and was a quiet studious boy with a singular thirst for knowledge and for those subjects in particular that were not in the school curriculum, for he was of an original and inquiring mind and was never content to run in the beaten track. He was admitted to the Bar of the Middle Temple in 1867 and established himself in Manchester. He took an active part in politics and represented South Salford as a Conservative from 1886 to 1900, when he did not seek re-election. From that time he devoted his whole energies to the many societies to which he belonged, bringing fresh light from his stores of knowledge to the discussions, and contributing more than 100 papers on subjects covering a wide field. He also published several large and weighty books. "The History of

the Mongols from the 9th to the 19th Century," in 4 volumes, is a surprising compilation on a most difficult and obscure subject, of which many of the details were buried in Russian, Persian and Indian records. It is the only standard work accessible to the ordinary student. In 1892 he was made K.C.I.E. in recognition of his labours on the history and ethnology of Asia, and F.R.S. in the following year.

"The Mammoth and the Flood" and "The Glacial Nightmare and the Flood" are vigorous and interesting attacks upon what the author called "the extravagant development of the glacial theory," but they do not affect the principles laid down by Hutton and Lyell, nor has he made a case for the restoration of the old geological

view that physical changes in the earth have been the result of sudden catastrophies. Still less can we accept the old Bucklandian explanation of the surface deposits over a large part of Europe and Asia having been formed by a flood of the Noachian type.

These works were followed in his later years by "The Life of St. Augustine," "St. Gregory the Great," and "The Golden Days of the English Church," which are full of interest. His family life was singularly happy, and he was greatly beloved by a wide circle of friends. Of no man can it be more truly said that he lived his life to the full. He will long be missed. W. BOYD DAWKINS.

Africa, West: Fire-making.

Cardinall.

Notes on Fire and Fire-making. By A. W. Cardinall.

85

The Talansi, Naukanni, Kassena and Builsa tribes of the Northern territories of the Gold Coast use "slush" lamps to light their huts. Specimens are illustrated in Fig. 1. No. 1 and 3 were bought in open market at Paga market in the Kassena country. They were two of a large number offered at 300 cowries apiece by a Naukanni girl. The specimen on the left has an extinguisher, which is laid on the platelike top. The wick consists merely of a piece of old cloth, floating on shea-butter.

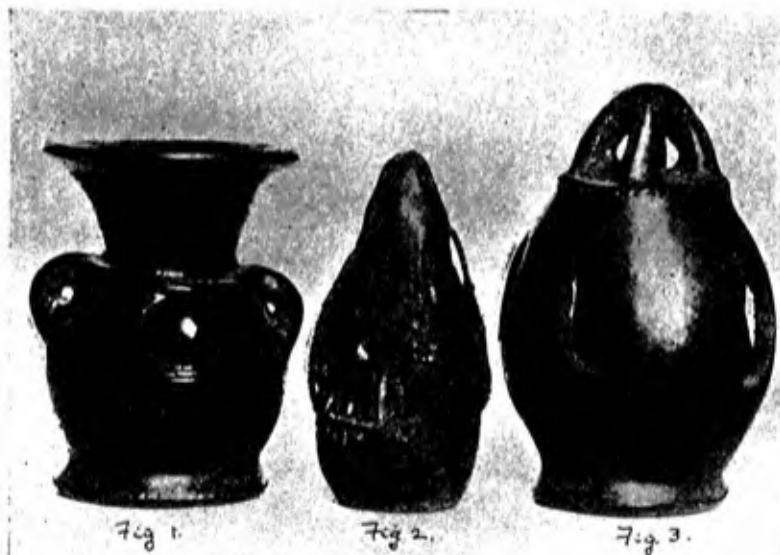


FIG. 1.

The central specimen was given me by an old Builsa woman. A string is attached to it for convenience in hanging.

To obtain fire the people all use a white quartz and "steel." The stone is obtained practically all over the country and is not sold, as it is too common to have any value. Any piece of convenient size is used.

The "steel" is entirely of native manufacture and is made as follows. As is well known, these tribes are iron-smelters and blacksmiths. The old, battered hoes and axes are taken to the latter, who smelt them down and fashion strikers similar to the collection illustrated in Fig. 2. To all intents and purposes the iron has become steel, but of a poor temper, which soon disappears entirely. In order to renew its fire, the "steel" is heated in charcoal made from the shea-butter tree.

This charcoal gives greater heat than that of the so-called fats and shea-butter which is used for making hoes, etc., according to the smiths. The charcoal is mixed

with the dung of any of the numerous species of house lizard and with that of a fowl. When properly heated the steel is beaten by the smith into shape again.

The tinder is made of the cotton from the kapok, and has to go through a proper preparation. The pod is placed unbroken into a slow-burning fire and left until the outer skin is well burnt. It is then buried for a short while to ensure its being completely extinguished, and after that put in a pot, where it is smashed up by hand, the cotton becoming quite black in the process. The seeds are thrown away.

This "tinder" is kept in all sorts of receptacles—little cotton bags, leather ones, and even hollowed out seeds of the fan-palm. This latter is reputed to have been

the first and earliest method of carrying it about, and it is rare now-a-days to come across such a purse. The commonest and most convenient way is to carry "flint," "tinder" and "steel" in a roll-up leather packet of a similar pattern to the ordinary camp "housewife." How convenient this is has been proved by many a white man out hunting when matches are wet or finished and he wants a light for his pipe, for every man in these parts carries "fire" with him.

The method of making fire seems simple—personally I am much too awkward to succeed. One holds the steel in the right hand, the striker being over one's knuckles. Between the thumb and first finger of the left hand one grasps the "flint" and the tinder is loosely held nearer the palm by both the first and middle fingers. Usually one blow suffices.

Among these people, I came across only one case of sacred fire. This was at Bedema in the Builsa country, where a

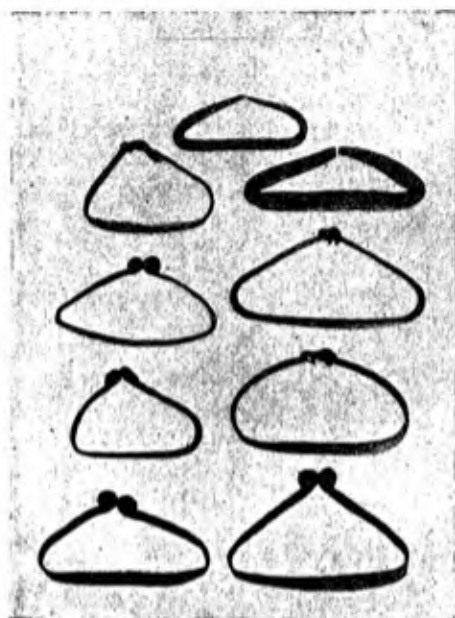


FIG. 2.

fire is maintained more or less permanently outside the chief's compound. There is no particular rite observed in lighting it. No man may take fire from it. It does not burn wood or dried corn-stalks, but is made of dried cow-dung, which is so stacked that it will burn for as much as three days without renewal. In the rains it is allowed to go out. Sacrifices are made to it, and blood and bones from them are placed in a pot which remains on top of the fire. Only the chief and one other man (whom I do not know nor could I learn) are allowed to eat from these sacrifices.

A. W. CARDINALL.

Britain; Archæology.

Murray and Passmore.

The Sheela-na-gig at Oaksey. By M. A. Murray and A. D. Passmore.

86

There is at Oaksey in N. Wiltshire a female figure of the kind known in Ireland as Sheela-na-gig. These are usually found in churches and are probably the remains of a fertility cult.

The figure at Oaksey is built into the outside of the north wall of the church, east of the porch, about 9 feet from the ground. It is carved in the same stone of which the church itself is built, but there is nothing to show whether it is in original position; nor whether it is contemporary with, or earlier than, the church. The date of the earliest work in the church is second quarter of 13th century.

The figure (Fig. 2) measures 13 inches from the feet to the top of the head, and 6 inches from the point of one elbow to the point of the other. The attenuated body has the ribs clearly marked. A noticeable point is the size and importance of the left hand, this is also a suggestion that the figure is pre-Christian. The flat surface of

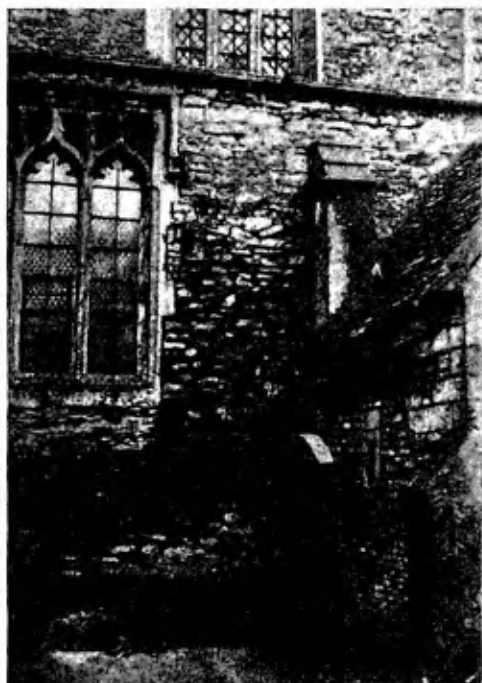


FIG. 1.
SHEELA-NA-GIG, OAKSEY, N. WILTS.



FIG. 2.

the stone has been slightly hollowed so as to make the figure stand out in relief. The weathering of the stone has practically destroyed the features, which appear to have been rudely indicated.

A short account of the figure was published, though without illustrations, in the *Wiltshire Archaeological and Natural History Magazine*, Vol. XXXIV (1906), p. 156.

M. A. MURRAY.
A. D. PASSMORE.

REVIEWS.

America, Central: Religion.

Spence.

The Gods of Mexico. By Lewis Spence. London: 1923. T. Fisher Unwin.
xv + 383. Price 30s. net.

87

Mr. Spence has given a useful summary of what is known of the Aztec gods, the information as to each being conveniently tabulated under the various heads of festivals, decorations, myths, etc. Among specially valuable features may be noted the large number of illustrations taken from the Codices, and the extracts from Sahagun, especially the strange and striking songs to the gods. The author deserves much thanks for making these accessible in English. There is a short bibliography, with some sound comments on the merits of the works therein; but it

is surprising to see the writings of Dr. Seler, one of the greatest of Americanists, referred to in the introduction as too arid and technical for the beginner. Few have written better or more interestingly than Dr. Seler and those who find his works too technical should leave the subject alone.

The calendar is relegated to an appendix and briefly dealt with. No mention is made of Bowditch's paper on the Lords of the Night and the Tonalamatl of the Codex Borbonicus (*American Anthropologist*, 1900) which is the most important contribution yet made to its subject. It is not correct to say that the Maya and Aztec day-signs are almost identical. On the contrary, they differ throughout, though they were probably originally similar in meaning.

Many interesting and suggestive views are expressed as to the origins and attributes of the gods. It would seem that the main idea of their being the gods of different races is sound, but the evidence is hardly sufficient to show what peoples each god did belong to. However, the author would doubtless not claim finality for his conclusions.

The least satisfactory portion is that dealing with Quetzalcoatl, the reputed inventor of the calendar. On the strength of certain Huastec attributes of his the conclusion is reached that the Toltec culture, of which the calendar was an essential part, was derived from the Huastec. This is a most astonishing conclusion. The Huastec alone of all the races from Nicaragua to Mexico did not employ the peculiar calendar which among all the other peoples was closely bound up with their religion and culture. It by no means follows, as Mr. Spence appears to assume, from the circumstance that the calendar was ultimately of Maya origin and the Huastec language was related to the Maya, that therefore the Maya culture of Guatemala and Yucatan, characterised by a certain style of art and the use of the calendar, is identical with the Huastec culture, characterised by a very different style of art and by the absence of the calendar. The Huastecs were an isolated branch of the Maya peoples, differing totally from the others in everything but language, so that evidence of Huastec influence is by no means evidence of influence of "Maya" culture as ordinarily understood.

In conclusion it may be said that the index might with advantage be fuller.

RICHARD C. E. LONG.

Ethnology.

Dixon.

The Racial History of Man. Roland B. Dixon. New York and London: Scribner's, 1923. 23 x 15 cm. Pp. xvi + 584. Pl. 44. Price 25s.

88

This is an interesting attempt on the part of a thoughtful worker to look at the problem afresh and for himself, and though we cannot feel that a large measure of success is attained, we fully appreciate the stimulation the book gives. The limitations seem due in part to weakness of biological outlook, dolichocephaly, mesocephaly, and so on, are, unintentionally, treated too much as counters. Further, it is not sufficiently realised that apparently groups of characters are inherited as such, it may be on Mendelian lines, and that crossing may lead to the rise of a stock with various mixtures of characters, some groups among which may be derived from one side, some from the other. As against these defects the author scores by realising that probably there is no racially pure group on earth at present, and that there may not have been such a group since early Palæolithic time and he is right in deducing from this the need for great reserve if averages are quoted. He strikes a valuable note in looking for the more pronounced types in a population rather than the more mediocre, though this has led to a weakness noted below.

The author's idea is to take cephalic (b/l) index, altitudinal (h/l) index and nasal index, to study their correlations and distributions, and to see whither this leads in the matter of human classification. The ratio of altitude of skull to length is a

useful figure in some cases, but the ratio of altitude to breadth often tells a more valuable tale—at least, in Western Europe. If we study survivors of the long-high heads of the later Paleoliths we find that, though the ratio h/b is very high (may be over 100 per cent.), the ratio h/l is not striking because, though the height is considerable the length is very great in these heads of indices 70–72.

Dixon distinguishes, on recognised lines, dolichocephaly (D), mesocephaly (M), brachycephaly (B), hypsicephaly (H), orthocephaly (O), chamæcephaly (C), leptorhiny (L), mesorhiny (M), platyrhiny (P), and then points out that the following are the possible combinations. To these combinations he assigns names which are intended to designate them and nothing more. The characteristics are thereby inevitably rather dissociated from actuality, and the geographical significance of the names is largely lost:—

D.H.L. Caspian.	B.H.L. Alpine.
D.C.L. Mediterranean.	B.C.L. Ural.
D.H.P. Proto-Negroid.	B.H.P. Palæalpine.
D.C.P. Proto-Australoid.	B.C.P. Mongoloid.

It will be seen that the middle terms are omitted, the set of eight refers merely to the more pronounced characters; this is a dangerous step in spite of the admitted importance of emphasis on more pronounced types. Dixon gives names because he thinks that, if two peoples are both generally D.H.L., this can be explained only by homology; in this he is probably right for most cases. The use of the above names, some of which are well worn in racial discussions, is a difficulty, for, though we realise the special application involved in using the term Mediterranean type for, let us say, Californian stocks, yet we may not be quite on our guard when the term is used for peoples in various parts of the Old World.

The lack of an absolute discrimination between the Neanderthal types and later ones is a biological weakness that leads the author to some strange statements here and there, but these are only incidental. The Proto-Australoid probably has no special connection with the Neanderthal type. The Mediterranean type is characterised as D.C.L., with Proto-Australoid and Proto-Negroid blood behind it. We think both Proto-Negroid and Proto-Australoid types are high-headed in spite of mentions of platycephaly for the latter, that platycephaly being merely marked recession of the forehead. The type ordinarily called Mediterranean sometimes retains a good deal of this old hypsicephaly and a good deal of the platyrhiny of those forebears as well, so there are many gradations from D.H.P. to D.C.L., and a good many workers believe that the latter characters have, in this case, evolved (by descent with modification) from the former. The author does not sufficiently visualise human beings as in process of evolution. "Tempora mutantur nos et mutamur in illis."

It would be easier to follow the arguments about various regions if the references to literature could have been indicated on each page, but we doubt whether it is worth while going into detail about interpretations. Prof. Dixon is clearly only acquainted in quite a general manner with archaeological evidences and his rapid sketches must be used with great reserve. He is, however, clear-sighted enough to appreciate the spread of brachycephaly, for example, in Europe. To account for increase in proportion of broadheads he discusses various movements into cities and the like, but does not seem to allow for the hypothesis that brachycephaly or one or other of its factors may be something like a Mendelian dominant when broadhead and longhead are crossed. We need a great deal more information on that topic, but the possibility of explanation on these lines is becoming apparent.

The reader who bears in mind carefully the limitation of meaning of such terms as Caspian, Mediterranean and so on when used in this book can derive much stimulation from reading the chapters and endeavouring to rewrite them in his own words.

The author has used a great part, at least, of the available literature that gives firsthand measurements; we have noted only a few omissions from his bibliographical list. He has thought for himself and produced a book many paragraphs of which are targets for criticism, but his thought is valuable to the experienced worker and one may well doubt whether the errors are more dangerous to beginners than those found in most general expositions of race problems.

H. J. F.

Britain: Archæology.

Mackenzie.

Ancient Man in Britain. By Donald Mackenzie. With a foreword by G. Elliot Smith, F.R.S. London: Blackie and Son, Limited. 1922. **89**
Pp. xvi + 257. 17 Plates and Illustrations in text. Price 12s. 6d. net.

This volume, Mr. Mackenzie tells us, deals with the history of man in Britain from the Ice Age till the Roman period; it is intended to interest a wider circle of readers than is usually reached by purely technical books.

The first 66 pages are devoted to the Palæolithic Age, including a long discussion on dogs in history and folklore. In these chapters the writer has followed in the main the conclusions set out in Fairfield Osborn's "Men of the Old Stone Age," the only point on which he perhaps differs is in his attempt to combine two opposing views by stating that the Maglemose men were Nordics from Siberia. Throughout these chapters the author writes as though all the inhabitants of Europe at this time were of the Crô-Magnon type; the references to Comb Capelle man appear to be later additions. Grimaldi man is not mentioned, and the word only occurs once, on page 36, as the name of a place.

The next 42 pages are devoted to a discussion of early trade, based almost entirely on the writings of Perry and Siret; while the remainder of the work, with the exception of a brief summary in the last chapter, is concerned with folklore, and with tracing beliefs and customs from China to Peru.

The writer has been much impressed by the discovery in the Clyde mud of a dug-out canoe which had been plugged with a cork. This does duty as an illustration of shipping at various epochs; for instance, it is attributed to Azilians, coming from Spain, on page 75, while it is referred to the early Bronze Age on pages 97 and 218.

There is much that is interesting in the volume, especially in the domain of folklore, but I fear that the wide circle of readers for whom Mr. Mackenzie has written it will close the work with a very vague idea of the history of Britain, at any rate between the end of the Palæolithic Age and the arrival of the Romans.

H. J. E. P.

ANTHROPOLOGICAL NOTE.

British Association for the Advancement of Science.—The annual meeting of the Association will be held at Liverpool from September 12th to 19th. **90**
Section H (Anthropology) will meet under the presidency of Professor Percy E. Newberry, M.A., O.B.E., who will take as the subject of his Presidential Address "Egypt as a Field for Anthropological Study." Professor Newberry will also open a discussion on "The Origin of Domesticated Plants and Animals." Among other communications to the Section will be a lecture by Sir Arthur J. Evans on "Crete as a Stepping-stone of Culture," a paper by Professor W. J. Sollas on "Miocene Man," and joint discussion with Section E (Geography) on "The Place of Man and his Environment in Sociological Studies," to be opened by Professor J. L. Myres.





FIG. 1.



FIG. 2.

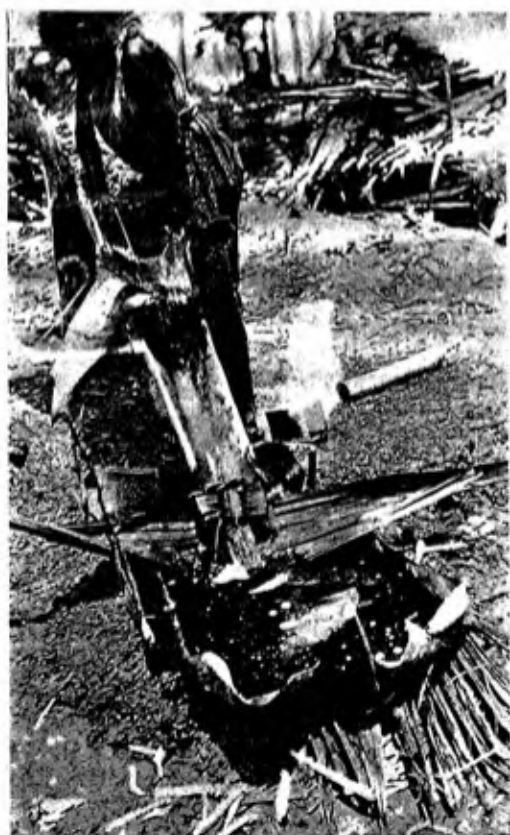


FIG. 3.



FIG. 4.

ORIGINAL ARTICLES.

With Plate L.

Papua: Technology.

Sago-making on the Fly River. By Rev. E. Baxter Riley.

Riley.

91

The propagation of the sago palms is from either seeds or suckers. The latter are called by the natives "*dou upi*," sago women. There are many different varieties of the palm. They flourish in low swampy land and attain a height ranging from 20 to 30 feet. The trunk is thick set and about 14 to 20 inches in diameter. They come to maturity about 15 years after they are planted. The trees used for sago-making are not allowed to flower. As soon as they mature the centre bud is cut out and all further growth prevented, the other leaves are left standing. The part cut away is considered a delicacy, and is cooked and eaten.

The decapitated trees are left standing for a considerable length of time—from one to as many as five years—before being cut down and made into sago. The natives assert that a larger quantity and a better quality of sago is obtained by this method. Some of the inland people cut down the tree immediately it is mature. Should a tree be allowed to flower or seed, it is useless. After the seeds are ripe the tree begins to die. A grub named, "*koni*," which is much prized by natives as a luxury, is found in trees which have run to seed.

When the sago palm is considered ready and dry enough, it is cut down by the owner. The bark is then nicked the whole length of the tree. On one side it is pressed down to the ground, the other side is left standing, being removed from the centre to the side. This is to prevent the sago chips from falling to the ground. The part of the bark which is laid flat on the earth is covered with a mat, upon which the pithy substance of the tree is placed as it is removed from the trunk.

As soon as the bark has been placed in position, the man retires and hands over further operations to his wife, whose duty it is to make the sago. Before beginning she has to procure an adze, or "*oto*," for the purpose of chopping up the trunk of the tree, and fix up a kneading trough and a receptacle for the sago.

About 6 feet of the thick end of the midrib of the sago leaf is cut off, namely the petiole, one end of which is about 18 inches broad, the other tapering to about 4 inches. This is called "*wowo*" and is the kneading trough (Pl. L, Fig. 1). It is supported at the broad end on a piece of wood or stout stick, about 3 feet from the ground, the other end rests upon the "*baru*," or receptacle for the sago. The "*baru*" is made from the bark of the "*te*" tree. Midway on the "*wowo*" is fixed a strainer, held in position by two wooden pegs. The strainer is a piece of "*sugu*" or cloth from the trunk of the cocoanut tree.

When these arrangements have been completed, the woman stands on the top of the tree trunk and with the adze in her hands chops it into small pieces, like thin shavings. Fig. 1 shows the method of using the "*oto*" or adze. The sago is cut with the adze almost touching the side of the right foot. The "*oto*" is made of two pieces of wood fastened together by rattan cane. The shavings fall upon the mat and are thus prevented from being contaminated by dirt. The shavings are collected and placed into the "*wowo*" or kneading trough (Pl. L, Fig. 2).



FIG. 1.—WOMAN USING *OTO*, OR ADZE, FLY RIVER.

Water is then poured upon the sago pulp, which is then pressed between the palms of the hands and the water runs towards the strainer with the particles of sago held in suspension (Pl. L, Fig. 3).

Pl. L, Fig. 4, shows the woman clearing the pulp from the strainer so that the water may run into the "baru" or basket at the bottom, which rests upon the ground. The white patch seen in the basket is sago which has been allowed to settle. The water is used again and again and the whole process continued until the amount required has been obtained. The water is baled out by means of a cocoanut shell after the fleshy part has been removed.

The sago is removed from the basket and made up into bundles. It is wrapped in leaves and securely tied ready for being taken home and sold. The amount of sago procured from different trees varies much. Five bundles weighing about 30 or 40 lbs. each are made from an ordinary tree, but as many as ten bundles of the same weight may be obtained from a large tree.

Pl. L, Figs. 1, 3, 4, and Fig. 1, are from photographs by H. P. Beach. Pl. L, Fig. 2, from a photograph by myself. E. BAXTER RILEY.

Africa, East: Art.

Bagshawe.

Rock Paintings of the Kangeju Bushmen, Tanganyika Territory.

By F. J. Bagshawe, M.B.E.

92

Ever since I became acquainted with the Kangeju Bushmen and formed my pet theory that they are of the same stock as the South African Bushmen, I have been looking for rock paintings such as the southern Bushmen have left in various parts of Africa, south of the Zambesi river. In some notes, written in 1918, I find that "I searched in vain for traces of paintings as are found in old Bushman haunts, but it must be remembered that this painting has been a lost art for many generations amongst the Bushmen." In August, whilst travelling near Kisana, on the eastern edge of the Iramba plateau, I commented upon a peculiarly shaped rock. A native sub-headman with me remarked that it had "a thing like a



FIG. 1—ROCK PAINTING OF ELAND COW, KISANA, TANGANYIKA TERRITORY.

"horse, or perhaps a mule" on it. I went across and found, on three rocks, paintings very similar to many which I have seen in South Africa. All are of animals, and are outline drawings in red pigment. One rock is fairly sheltered and has only some smudges and smears such as a child might make—I fancied that I could trace fingers—and, protruding from them, several well-drawn heads and necks of young ostriches, the peculiar flatness seen in the young bird

being plain. The next rock was a regular picture gallery. On it, although the drawings were faint, are clearly outlined giraffe, kongoni and impala, with other animals which I could not make out. On this rock much damage has been done by Aniramba children who have tried to obliterate the drawings, which are close to a spring where they draw water. The forequarters have been chipped off, quite

recently, from an animal which the natives say was a dog. It is the best painting of all, and is interesting, as I do not remember ever seeing or hearing of a dog-painting in South Africa. The third rock shows only one painting, and undoubtedly the best. It is of a pregnant eland cow with, near her, what I take to be a calf (Figs. 1 and 2). In September Mr. Johnson, Administrative Officer, Mkalama, very kindly went to Kisana and secured some photographs of this last rock, though he failed, owing to bad light, to get results from the others.

The Aniramba disclaim all knowledge of the origin of these paintings. They say that they were there when they came, many generations ago, and they have taken no interest at all in them. Indeed one of the rocks, that with the ostriches, was only discovered during my visit, having escaped notice previously. They have made no attempt to preserve the paintings and have allowed the children to mess about with them at will, in some cases with disastrous success.

Two, at least, of the rocks, including that bearing the eland, are exposed completely to sun, wind and rain. Yet the pigment used remains, except where



FIG. 2.—ROCK PAINTING OF ELAND COW AND CALF, KISANA, TANGANYIKA TERRITORY.

chipped off by human Vandals, clear and distinct, holding the secret of a lost art which would be worth a fortune to a modern manufacturer of dyes.

I questioned the Kangeju about these paintings, which are at some distance from their habitations. Some, rather grudgingly I fancied, admitted knowledge of them and said that they might have been the work of Kangeju of long ago. Others declared that they knew nothing about it and had never heard of them. All were emphatic that no Kangeju of to-day can paint and that there are no more paintings anywhere. I am having search made and that more will come to light I have no doubt: indeed I have already heard of some. All found will be carefully preserved.

F. J. BAGSHAWE.



FIG. 3.—ROCK PAINTING OF HUMAN BEINGS, KONDOA IRANGI, TANGANYIKA TERRITORY.

Britain: Art.

Livesey.

A Note on Threshold and Hearth Design in N.W. Cumberland.*By the Rev. Herbert Livesey, B.A., L.Th., F.R.A.I.***93**

Under the title of "Door-step Art—a traditional Folk Art," Mr. F. H. Newbury, in 1907, before the Leicester meeting of the British Association, put forward a very interesting theory. His interest was, of course, directed mainly by his specialist knowledge of the fine arts, and he stated that "the early scribbblings of children, though apparently meaningless, may be shown to be instinctive art products. These drawings become more purposeful and regulated as the mental and physical development proceeds, and the doorstep art is filled with the designs and application of geometrical patterns and drawings created in this stage of artistic evolution."

Professor Bryce, remarking on its anthropological bearings, stated that the designs were traditional in character, being handed down from generation to generation, and to this I can myself testify, for in all cases where I have questioned the artist I have been informed that "my mother always did it like that." The designs are nearly always purely geometrical and conventional and there is no zoomorphic motive, and I have found no attempt to represent any natural vegetable form. The only one which had any definite plant form was obviously spurious, and upon questioning was found not to be traditional. Here it may be desirable that the concluding remarks of Professor Bryce be mentioned: "Attention should be directed to the existence in this country of such primitive, untaught, folk designs, so that some adequate collection of examples may be formed before the art of the Board School kills the spontaneity of the designs."

The art which concerns us is done entirely by women, and is quite independent of any outside influence. The media in which the designs are executed depends largely upon the class of stone upon which it will be used. In Cumberland the doorsteps are chiefly of red sandstone, and the designs of necessity must be of some other colour if they are to be seen. So the usual medium is either white chalk or a soft grey sandstone, or even a white stone known locally as "alabaster." The hearths are of slate slabs or of granite; here the medium of decoration is either one of the above or ruddle, known as *rud*, a kidney-shaped stone found between the layers of sandstone, or in iron ore deposits, and of a bright red colour. These rubbing stones are often purchased from pedlars, one such pedlar being known only as "*Rud*" Mary.

The question arises whether the designs are, as Mr. Newbury interprets them, the expression of a primitive art instinct, or whether they are a survival. Professor Bryce desired to ascertain the archaeological value of the art and hoped that it could be proved to have relations to some type of art of the past, and that if we could get collections of the designs from different districts it would, in all probability, throw some indirect light on the distribution of cults and peoples. That it is a survival I do not for one moment doubt, my own interest being specifically the magico-religious. I was immediately struck with the similarity of idea in the spiral design to the soul-traps of Danger Isle, and was interested to find if any tradition as to the meaning still existed. Generally, my search has been futile, but an old woman whom I asked concerning the doorstep design said smilingly that when she was a child she was told that it was to keep the devil out; and I asked a youth if he had ever been told why it was done, and he later told me that his grandfather said it used to keep the pixies away. It is held now to be a criterion of a clean house; whether this is just a modern material fact or a survival, the house being considered free from demons, is difficult to say; but there is no doubt that the threshold certainly even yet plays a very important part in this part of the world, and even in other districts. The immemorial sacredness

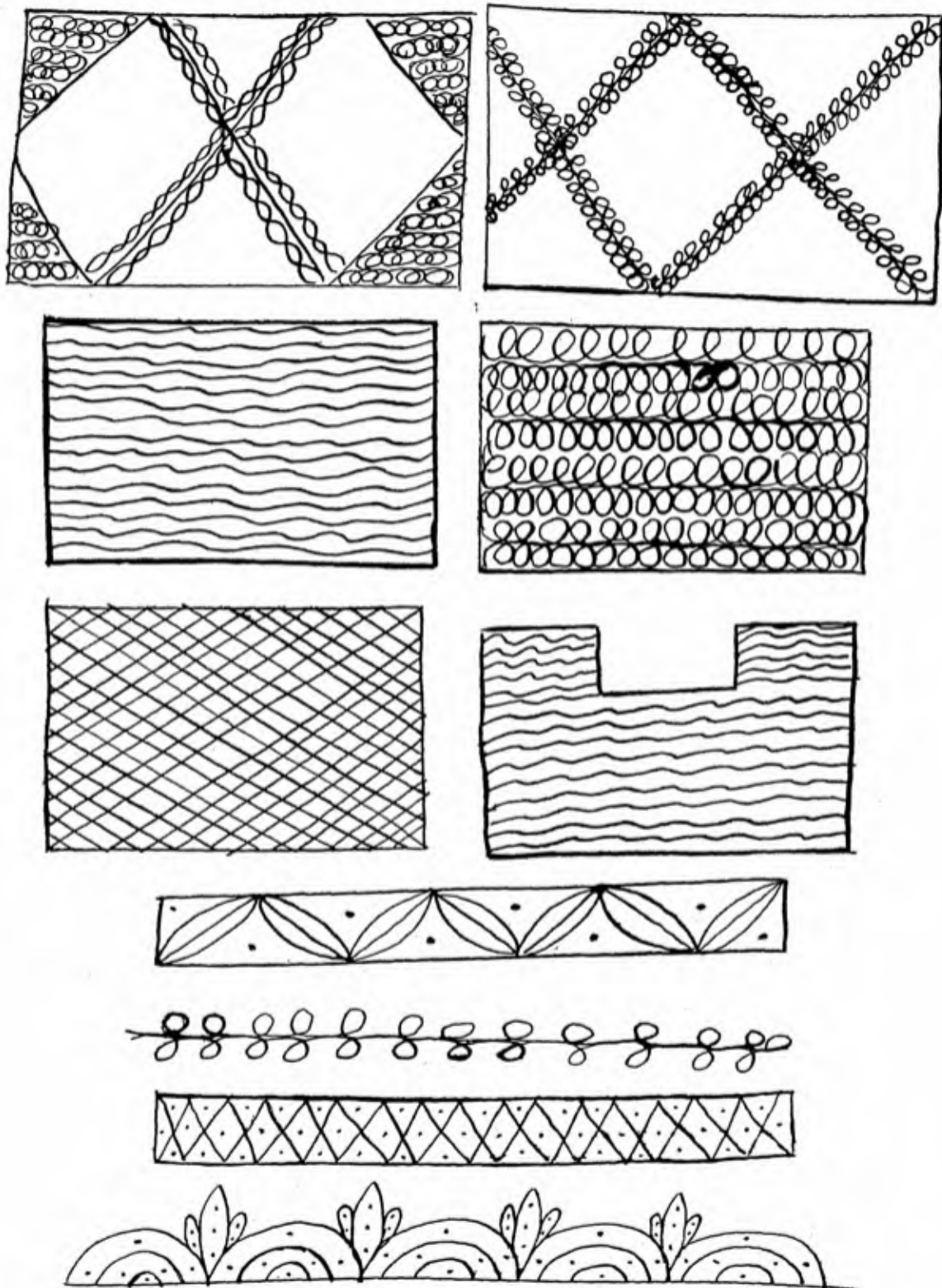


FIG. 1.—HEARTH AND DOORSTEP DESIGNS FROM N.W. CUMBERLAND.

of it may have some connection with its decoration. The idea of first-foot on New Year's Day, when the luck of the year depends on the person who first sets foot on your threshold; also a new baby must not be taken across the doorstep of another's house until it has been christened; nor must the mother go into a neighbour's house until she has been "churched." Of course, it is obvious that some connection may have existed in the likeness of the ruddle to blood, and may have signified some sacrificial element when used on the threshold which either appeased or frightened away evil spirits. I fear I am not competent to discuss the art motives; it requires a more specialised knowledge of art forms and their evolution. It would be interesting to learn if the origin of the art is Celtic, and in what way it differs in different places. The illustrations are all by the people in the district, from whom I have endeavoured to get information. Although in some cases crude, I felt it better to keep them so.

HERBERT LIVESEY.

Torres Strait: Puberty Customs.

Done.

A Girl's Puberty Custom in Boigu. *By Rev. J. Done.*

94

In the island of Boigu, Torres Strait, I recently came across a native custom which does not appear to be known outside. At all events Mr. John Bruce, of Murray Island, whose experience of Torres Strait is unique, says he has not heard of it in the eastern islands. A feast was given in honour of a young girl which set the island gossips talking. It seems the first signs of menstruation had appeared, and the occurrence was made the occasion for some jollification. I was told by the old men "we always do this thing, this proper fashion belong this island, only we do "him inside along bush;" it was the publicity which caused the talk.

At the first sign the mother (*apu*) would tell the father (*tati*). The girl's maternal aunt (*nagwam*)—(Murray Island it would be *negwam*)—took the girl to the bush, where she was instructed what to do, and was kept in seclusion for the duration of the period, while the uncle (the chief on the maternal side) (*waduap*) called together the adult relatives for a feast, which always took place away from the village and without the knowledge of the younger people.

So far as I am able to trace, this feast is peculiar to Boigu, and probably comes from Papua, which is only three or four miles away.

Note that the maternal side takes the lead. In other customs in these islands, as far as I know, it is the father's brother who figures, who is the big father (*koi tati*), while the mother's sister then becomes merely little mother (*magi apu*).—J. DONE.

Women's puberty customs have been recorded for Saibai, Yam and Tutu, Mabuiag, and Muralug (see Vol. V. of the "Reports of the Cambridge Anthropological Expedition to Torres Straits," 1904, pp. 201-205). Boigu must now be added. This custom differentiates the western from the eastern islanders, since it appears to be unknown among the latter. Dr. Seligman also records (*l.c.*, p. 205) similar customs from North Queensland.—A. C. HADDON.

India: Religion.

Gordon.

Some Notes on "Possession by Bhūts*" in the Punjab. *By Capt. D. H. Gordon, D.S.O.*

95

The belief in "possession by bhūts" is common to all the less educated people of the Punjab. The occurrence of "possession" is indeed so common that very little notice is taken of it. The man may become "possessed" in a number of

* Bhūt, a spirit.

different ways, according to various special and personal beliefs on the subject, but the three generally recognised forms are the following. One, the fortuitous encountering of a wandering Bhūt, which will seize upon a man in order that it may inhabit his body when inclined. Secondly, the entering in of a spirit of a great friend, who is either dead or who has power to transport his spirit. Lastly, possession as a result of a jādūgar* or any other person who is learned in Mantar or who is a Kalām parhne-wālā† having despatched the Bhūt as a "sending."

The first class is the most common. Wandering Bhūts may be met with in waste and desert places,‡ among tombs and ruins, and on the banks of small ponds.§ These Bhūts are normally invisible, the only occasional manifestation of their presence being small flickering flames, which are supposed to be seen wandering in waste places. Impurity is one of the usual opportunities which a Bhūt can seize of entering a man. A man goes out into a waste place to relieve nature and neglects to cleanse his hands. The Bhūt, who is lying in wait, takes his opportunity and the man will soon show the symptoms of possession.||

I recently heard a tale relating to this matter from a Sikh Indian Officer, who said that, when a child, he went down to a small pond to bathe and on leaving the pond he found a red cap alongside his own sāfā (turban). He had seen no one come to leave the cap there and could find no one about, so he went home wearing the cap.¶ That evening he fell into the trance that is the usual symptom of possession. The Bhūt was exorcised, but this man maintains that evil effects have been present off and on ever since.

With regard to the Bhūt as a "sending," the belief is that, when a jādūgar sends a Bhūt, if the man he sends it against, or any friend of his, has more powerful spells than the sender, then the Bhūt may be returned. A returned Bhūt is considered to be much more dangerous than when first sent out, and is believed to vent its energies on the original sender, who will die. The ordinary symptoms that I have personally observed in this lesser possession are not very severe. The possessed falls into a trance, the muscles of the body and limbs become tense, the face is somewhat distorted from the tensing of the muscles, the eyes open but without intelligence or recognition, the breathing very laboured and heavy, the head is moved from side to side at intervals, the whole of the muscles twitch incessantly, the pulse is normal and the chest, when sounded with a stethoscope, gives no indication of any disorder. I have no observations of temperature.

The brief duration of the fit and the relatively small effect sustained is shown by an instance of a servant who fell in a trance at 7.25 p.m. After being examined, exorcism was used, the subject fell into a natural sleep, and by 8.00 p.m. was up and waiting at table.

The usual method of temporary exorcism is to shame the Bhūt into departing. This is done either by holding a shoe over the man's mouth, or, occasionally, some dog's droppings specially prepared by burning or, more properly, toasting.

* Jādūgar, a wizard.

† Mantar, incantation. Kalām parhne-wālā, a reader of spells.

‡ Now that much more land than formerly was the case has been brought under cultivation, Bhūts are supposed to be on the decrease.

§ Chhapri, or Tobhā, these words often appear in tales about Bhūts.

|| The "privy Bhūt" is well known throughout the East. In the "Arabian Nights," when the damsel Tohfāt-al-Kulub, conducted by Shaikh Iblīs, enters the world of the Jinn and the Jānn, she does so through a small door which appears by magic in the privy. When, too, the ogress, disguised as a pretty girl, tries to cozen the King's son, she says: "I went out one day to obey a call of nature, when an Ifrit of the Jinn snatched me up."—(Burton's Trans., Vol. IX and Vol. V, Library Ed.). I have heard recently of an Englishman who became so obsessed by the idea of the "privy Bhūt" that he kept the lid of his privy padlocked.

¶ He would have been too young to have taken the pāhul and so, not being baptised into the Khalsa, could wear a cap.

During exorcism the subject has to be held, as he fights with actually supernatural strength. That is, a slightly built, weedy man, as I have myself seen, will tax the strength of two strong and well-built men while trying to keep him held.

The Bhūt will try and persuade the exorcists to leave it alone as it does not intend to do the man any harm; if, however, the shoe is kept menacing the Bhūt, the possessed firmly held down, and the bystanders help matters by telling the Bhūt to go, then it will leave the man, whose breathing at once becomes natural and who falls into a normal sleep. The subject on waking recalls nothing of what he has said, or rather what it is believed the Bhūt has said through him. Nothing but the reading of a Kalām* or Mantar, by one skilled in these matters, is supposed to effect a permanent exorcism. The Bhūt fears the reading of a spell, and I have heard a possessed man say, "You are my enemy, don't mutter spells in my presence," clearly showing the fear of the Bhūt for the Kalām reader; but on this occasion there was no one versed in spells obtainable, and no one will attempt exorcism by Kalām unless he feels sure that his spell is powerful enough.† Satisfactory temporary exorcism, after a struggle and loud pleas on the part of the Bhūt to be allowed to remain, was effected by a slipper.

This form of Bhūt is quite different to a Jinn, about which I have heard many tales, but have no personal experience.

In all cases of exorcism the Bhūt is requested to give some sign that he has departed. Usually a pair of shoes are inverted on the threshold and the Bhūt is asked to set them right side up. The fact is, that in the confusion of the exorcism, someone obligingly assists the Bhūt by turning the shoes over or by so setting the shoes that they are bound to topple over of their own accord. D. H. GORDON.

Religion.

Róheim.

The Passage of the Red Sea. By G. Róheim.

96

Sir James Frazer mentions two variants of this theme—Alexander the Great and Scipio—that have certainly some foundation in actual events, and two African variants which must be classed as purely legendary and may perhaps be connected with Exodus xiii, 17^o. We can add some more parallels and try to form an opinion on the question of migration or independent origin.

1. *Shilluk*.—The clan called Kwa Obogo was founded by Obogo, a servant of Nyikang. When they arrived at the Nile the current was blocked up with sudd so that they could not find a crossing. Then Obogo told Nyikang to kill him. He was consequently stabbed with a spear. When his blood touched the sudd it parted, and a clear passage was furnished for Nyikang and his party. Obogo's self-sacrifice took place at the end of the earth.†

2. *Mweru*.—The origin of the *Ntwaita* clan is explained as follows. A long time ago they lived far away from their present habitat, and the clan was called *Njiru* in those days. Enemies attacked their country, they were penned in between the enemies' army and the river. The chief of the enemy demanded three things: (a) countless fleas. They went to their medicine man and he told them to cut off

* Among Mahomedans the usual Kalām employed is the reading of, or the swallowing of water in which have been soaked, the two preventative Suras of the Koran, namely, "I betake me for refuge to the Lord of the DAYBREAK, against the mischiefs of his creation; and against the mischief of the night when it overtaketh me," etc. And, "I betake me for refuge to the Lord of MEN, The King of men, The God of men, against the mischief of the stealthily withdrawing whisperer (Satan)," etc. (Koran, Rodwell's Trans.).

† In common with similar beliefs in all countries, it is held that the man who loses heart and falters while making an incantation is lost. This fear is usually the outcome of lack of complete knowledge, the neophyte hesitating lest he may conjure up powers beyond his control.

‡ J. G. Frazer, "Folk-Lore in the Old Testament," 1919, II, 456-462.

§ D. Westermann, "The Shilluk People, their Language and Folklore." Berlin, 1912, 130.

the tails of all their cattle and chop them into fine pieces; (b) a pair of hide sandals with hair on both sides. The medicine man uses the ears of a donkey for this purpose. (c) A stick of iron reaching from earth to heaven.* The medicine man cut open the body of a human victim from his chest to his abdomen to be able to fulfil this last condition. He began to examine the internal organs and then he told them to bring a small ewe lamb, some ass's milk and some human milk and he took all these things to the river which was cutting off their only route of flight. The milk was poured into the river,† the lamb was tied to the bank and the medicine man prayed to God to give his people a way of escape from the enemy. God heard the petition, divided the waters and the tribe crossed on dry land. The laibon then prayed that the flow of the river might be restored behind his people and it was so; he then sewed up the body of the man whom he had cut open‡ and he quickly recovered and went along with the tribe. This is why they are called *Ntowaita*, *kuita* meaning "to cut."§

3. *Ba-Ila*.—A woman sends her son to steal cattle. The old woman had medicine. When the man reached the river he called to her saying, "Mother, strike the water." The mother took her medicine root and with it smote the water so that the man and ox passed over dry-shod, and then the river flowed on. But as he kept the larger part of the meat for himself and his wife, his mother refused to open the water-passage for him when he was pursued by the villagers, and they killed him.||

4. *Namaqua*.—Heitsi Eibip, a great and celebrated sorcerer, was travelling with a number of people and the enemy pursued him. On arriving at some water he said, "My grandfather's father, open thyself that I may pass through, and close thyself afterward!" So it took place as he had said and they went safely through. Then their enemies tried to pass through the opening also, but when they were in the midst of it, it closed again upon them, and they perished¶.

5. *Wichita*.—Little-Big-Belly-Boy took off his bowstring from his bow, stretched it as long as he could and made it long enough to put across the water. After he thought it to be long enough he took the string and raised it, swung it, brought it down and hit the water with it, and parted the water. When the water parted he ran fast through the dry place and got through before the water closed upon him.**

There can be no doubt of the formal nature of the similarity and the independent origin of var. 5. It is only the African variants that interest us from the point of view of historical contact. As for var. 4, this possibility rests on the assumed relation between Hottentots and Hamites. The case is different with our Shilluk and Mweru variants. Here we must call attention to the fact that the Hebrew legend is connected with the vernal festival of Passover. The central feature of this festival was the sacrifice of a lamb and Sir James Frazer has shown that there is good reason for regarding the lamb as a substitute for the sacrifice of the first-born

* For similar impossible tasks usually given to a demon, cf. A. Aarne, "Märchen vom dummen Teufel," F. F. Communications 5, No. 1172, 1173, 1174, 1175, 1176, 1180.

† For milk poured into the river as a sacrifice when the cattle is brought over, see Westermann, "The Shilluk People." 1912, 173.

‡ On medicine men who cut people open and make them revive afterwards, compare my note in "Imago," 1921, VII, "Das Selbst," pp. 20-22.

§ C. W. Hobley, "Ethnology of A-Kamba and other East African Tribes." 1910, 157, 168. Hobley thinks the story may have filtered down from the Semitic race of the Bwotana, p. 189. The magician reminds us of Moses at the Court of the Pharaoh. The staff or stick of iron, prominent in the story of Moses, is mentioned here and in the Tanganyika variant.

|| Edwin W. Smith and Andrew Murray Dale, "The Ila-speaking Peoples of Northern Rhodesia." 1920, II, 415, 416.

¶ W. H. I. Bleek, "Reynard the Fox in South Africa." 1864, 75; cf. *ibid.*, p. 64, "Stone of my ancestors! divide thyself for us." Th. Hahn, "Tsunu Goam, the Supreme Being of the Khoi-Khoi." 1881, 55. Both from Knudsen's manuscript.

** G. A. Dorsey, "The Mythology of the Wichita." Carnegie Institution, 1904, 123.

child.* We shall, therefore, presume that legends which contain these sacrifices and the passage through the waters must be referred to a common source with the Hebrew myth. The Wafipa relate the story of one of their kings who sacrificed a sheep, dipped his staff in the blood of the victim, and struck the surface of Lake Tanganyika with this staff, whereupon the water opened a passage for him.†

The connection with the narrative in Exodus xiii is still closer in our 1 and 2 variants. All three are legends that deal with the birth of a human group. Israel is liberated from Egyptian thralldom and begins life again as an independent nation. The Shilluk and Mweru legends explain the origin of a clan. Obogo, the servant of Nyikang,‡ corresponds to Moses as servant of Jahve, although Nyikang is a royal ancestor rather than an otiose high-god of the proto-monotheistic type.§ Obogo dies when the Obogo clan commences its career; Moses, at the end of the wandering, before Israel takes possession of the Holy Land.|| Certain features seem to indicate that the birth and death of Moses are even more closely connected with the vernal sacrifice of the first born than we should assume at first sight. For circumcision is traditionally regarded as a redemption of the first-born and in the legend which explains its origin we find Jahve attempting to kill Moses, and desisting only when placated by the severed foreskin.¶

It is also Jahve who kills the first born of the Egyptians at Passover** ; originally the first born of the Jews themselves, but, since the lamb-sacrifice is substituted for that of a child, the unmitigated form of the rite is projected to a foreign nation. Moses is the hero of a typical birth-myth, the offspring of an incestuous marriage, and his birth closely connected with another sweeping generalisation—to kill all male children††—only in this case the relations between Hebrews and Egyptians are the reverse of what we find in connection with the vernal festival. The parallelism is traceable through myth and ritual from what we have called the birth of Israel to the birth of Moses‡‡ and to the spring festival as the season of the birth of the year and animal life in general.§§ Special emphasis is laid on the connection between circumcision and the Passover, no uncircumcised person shall be admitted to the feast.|||| Moreover we find the passage through the waters repeated a second time: before taking possession of the Holy Land the Jordan is traversed in exactly the same manner as the Red Sea. And what follows? Another Passover and a general circumcision festival! ¶¶ We know very well that the two prominent features of primitive initiation ceremonies are the symbolism of rebirth and circumcision, and we may, therefore, conjecture that the *passage through the water which is thus*

* J. G. Frazer, "The Dying God." 1911. *Golden Bough*, III, 178. In 1 we have a human sacrifice, in 2 both a man and a lamb, in the Wafipa variant a sheep.

† Lechaptols, "Aux Rives du Tanganika." 1913, p. 54, quoted by Frazer, *Old Testament*, II, 461.

‡ However this seems to be a general formula in Shilluk legend as all the clans trace their origin to various "servants" of Nyikang, cf. Westermann, *l.c.*, 127, 135.

§ Cf. C. C. Seligman, "Some Aspects of the Hamitic Problem in the Anglo-Egyptian Sudan." *Journ. R. Anthr. Inst.*, 1913, 663.

|| Deuteronomy xxxii, 78.

¶ Exodus iv, 24-26.

** Exodus 11, 4, 5. For the connection between Passover and circumcision cf. Exodus xii, 44-48.

†† J. G. Frazer, "Folk-Lore in the Old Testament." 1919, II, 454. Exodus xi, Numbers xxvi, 59, Exodus i, 22.

‡‡ In Var. 3 it is the mother who opens the waters for her son to pass.

§§ The taboo on breaking the lamb's bones, Exodus xii, 46, can hardly be interpreted as directed against the usage of consuming them—W. Robertson Smith, "Lectures on the Religion of the Semites," 1907, 345—but must be understood as a method of multiplying the flocks, a pastoral "intichiuma" ceremony by inducing the sacrificial animal to be reborn in many lambs. Cf., J. G. Frazer, "Spirits of the Corn and of the Wild." 1912, II, 256.

|||| Exodus xii, 44-48.

¶¶ Joshua iii, 3, 5.

permanently brought into connection with circumcision in the Bible represents this ritual of death and rebirth* and that the Passover is originally an initiation ceremony which was regularly performed at the vernal season. Moreover, in the case of the Shilluk, we find what looks like a ritual basis of the legend. At spring the Kudjur receives the sacrifice of a white and a black ram from every family. When the Kudjur has eaten the lamb the paterfamilias may sow the sorghum in his field. Like Obogo in our myth, the animal is killed by a thrust of the spear and the blood caught up in a calabash and carried into the Nile,† just as the water of Lake Tanganyika opens when touched with sheep's blood. We shall, therefore, regard the historical connection of the Hebrew myth with the Shilluk (Nile), Wafipa (Tanganyika), Mweru (Northern slopes of the Kenia) variants as beyond a doubt, while the question may still be left open for the other African variants.

G. RÓHEIM.

Anthropology, Physical: Sex Ratios.

Parkes.

The Respective Sex-Ratios of White and Coloured Races. By

A. S. Parkes, B.A., Ph.D.

97

An interesting but neglected aspect of the sex-ratio arises in connection with the racial variations in the proportions of the sexes. A review of the available data shows that there is a marked difference in the sex-ratio of white and coloured races and that inside these groups the sex-ratio shows very little variation. The term "coloured races" is here used to mean black and brown peoples. What little we know about the proportion of the sexes in yellow races seems to show that in this respect they fall in with the group of white races. We may consider the racial variations and the proportions of the sexes in some little detail. In England and Wales the sex-ratio at birth for the last 80 years has been about 104,‡ and the variation around this average has been inappreciable. Other European countries, together with the American States, show a sex-ratio which is very similar. The following table, taken from Ploss (7), shows this:—

TABLE I.—BIRTH SEX-RATIO (FROM PLOSS).

Russian Poland - - -	101	Denmark - - -	105
England and Ireland -	104	European Russia	105
France - - - - -	104	Italy - - - - -	106
Germany - - - - -	105	Austria - - - -	106
Switzerland - - - -	105	Massachusetts - -	106
Belgium - - - - -	105	Spain - - - - -	107
Holland - - - - -	105	Connecticut - - -	110
Sweden - - - - -	105		

* This would, therefore, be a proof for the part played by water as a symbol of the amniotic fluid in rites connected with rebirth. Rank, "Der Mythos von der Geburt des Helden" (second edition), 1922. Cf. W. H. R. Rivers, "The Symbolism of Rebirth Folk-Lore," XXIII, 1922, 15. (Rivers tries to show that water has nothing to do with the rites of rebirth. Cf., however, a clear positive proof in India, T. W. Hauer, "Die Anfänge der Yogapraxis," 1922, 85.) For the passage as a symbol of rebirth, cf. Róheim, "Zur Psychologie der Bundesriten," *Imago* VI, 397, *Idem*, "The Significance of Stepping Over," *Int. Journal of Psycho-Analysis*, III, 320. For puberty rites of this order cf. "On the way down from the summit to the place where we had halted the old men had bent down small saplings to form arches, under which the novices had to pass." A. W. Howitt, "The Native Races of South-east Australia," 1904, 536. A similar rite of the Ovambo and of the Washamba at circumcision is mentioned by J. G. Frazer, "Balder the Beautiful," 1913, II, 183. Cf. *ibid.*, II, 168, 225. It would not be difficult to collect an array of facts on the part played by immersion in water in puberty rites; these are probably to be interpreted both as lustration and rebirth ceremonies. The novice "dragged backwards and forwards several times, for the most part completely immersed in water." B. Spencer, "Native Tribes of the Northern Territory of Australia," 1914, 99. Novices led to the edge of a pool, plentifully sprinkled with water. Howitt, *loc. cit.*, 556.

† L. Frobenius, "Und. Afrika Sprach," 1913, III, 80.

‡ Considered throughout as males per 100 females.

In the case of yellow races the data are less abundant, but Newcomb (6) says that in Japan the sex-ratio of more than a million births was much the same as the European, and Bugnion (1) gives the figure for Japan in 1895-1905 as 104·6, which is raised to 104·94 on including the still-births.

Turning to coloured races, all the figures available show a low sex-ratio at birth. Newcomb (6), from the census of 1900, found that there were 20,522 American negroes under one month of age and of these 10,200 were males and 10,322 were females, giving a sex-ratio of 99·8, which is presumably not very different from the sex-ratio at birth. In Cuba, between 1904 and 1906, Heape (3) found that the black races showed a sex-ratio at birth of 101·12, whereas the white races showed 108·42 males per 100 females at birth. Little (4) found that in the Sloane Maternity Hospital the U.S.A. coloured matings gave a sex-ratio of 93·61 for first births and one of 97·73 for subsequent births, while European pure matings gave a sex-ratio of 115·51 for first births and one of 97·73 for subsequent births. These three cases relate to different races in the same locality and illustrate very well the fact that the variation is racial and not climatic. Three other instances of the low sex-ratio of coloured races may be given. Wappaus (6) recorded a ratio of 98·53 for the blacks in Venezuela, and Man (5) and Felkin (2) report an excess of females at birth among the natives of the Andaman Islands and among the Waganda tribe of Central Africa respectively.

It thus appears certain that there is a fundamental difference between the sex-ratio at birth in white and coloured races and in view of this we are entitled to seek the reason. It may help in this endeavour if another case is considered where the variation in the sex-ratio is exactly reversed between white and coloured races. This is the influence of the number of the pregnancy. Whereas the sex-ratio of higher parities* is known to be lower than that of earlier ones in the case of white races generally, in British West Indian and U.S.A. coloured races Little's investigations showed that the sex-ratio of earlier births was lower than that of later ones. This last peculiarity is confirmed by Felkin (2) for the Waganda tribe.

If we admit the principle of the now generally accepted chromosome theory it follows that sex is determined at conception and therefore that there is a sex-ratio as early in life as this. Hence it follows, again, that the sex-ratio at birth may not be indicative of the ratio at conception unless the sex-ratio of mortality during gestation is the same as the sex-ratio at conception. We know that there is a considerable amount of prenatal mortality and we know also that this falls preponderatingly upon the males, hence the sex-ratio at birth is a product of two factors: the sex-ratio at conception and the amount of the ensuing differential mortality. This means that variation from time to time, from place to place, or from race to race may be the result of variation in either or both of these two factors. It has been shown by the present writer that the diminution of the sex-ratio in successive parities in white races is due to an increased amount of differential foetal elimination, so that it is not unreasonable to suppose that in coloured races the lower sex-ratio of earlier births is due to earlier pregnancies having a greater amount of pre-natal male wastage than later pregnancies. Now a large proportion of the total of births in any community is made up of first births and this generalisation no doubt applies more strongly to coloured races than to white races and thus the sex-ratio of first births will to a considerable extent mould the sex-ratio of total births. Felkin (2) in fact specifically states that in the Waganda tribe the excess of females among total births is very largely accounted for by the excess in first births. If the sex-ratio of first births is instrumental in moulding the sex-ratio of total births the cause of the low sex-ratio of first births must be an essential factor in producing the low

* The number of the pregnancy is usually spoken of as the parity.

sex-ratio of total births. This theoretical conclusion is supported by all known practical considerations and it cannot be doubted that conditions during gestation are much worse in coloured races, a condition of things which will increase pre-natal mortality. The excessive pre-natal wastage of males will thus be accentuated and this will lower the resulting sex-ratio at birth.

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A. S. PARKES.

REVIEWS.

Africa, East : Ethnography.

Driberg.

The Lango : A Nilotic Tribe of Uganda. By J. H. Driberg (Uganda Civil Service). With a Foreword by Sir Robert Thorne Coryndon, K.C.M.G., Governor of the Uganda Protectorate. London : T. Fisher Unwin. 1923. Pp. 457. 10 x 7. £3 3s. net.

The district now inhabited by the Lango lies east of the Nile (being separated by it from the country of Bunyoro) and north of the lakes Kioga and Kwania, through which that river passes after leaving the Victoria Nyanza at Jinja. This tribe appears to be a branch of the Shilluk, or of that stock which was broken up by the impact of the Bari and Latuka (Lotuko) from the east into the three sections of the Shilluk, Lango and Gang (Acholi)—the first moving northward, the other two southward. This migration is supposed to have begun during the sixteenth century, and to have proceeded in successive waves. Mr. Driberg gives a detailed account of these wanderings, obtained through a careful collection and sifting of Lango traditions, which, he notes, are in substantial agreement with the reports of Baker and Emin Pasha.

"Nilotic" (in spite of Meinhof's quite pertinent objection that it would be as scientifically correct to speak of "Danubian languages") is perhaps as good a name as any other for designating the speech-group which includes Shilluk, Dinka, Gang, Lango and Luo, along with some others. Ateso and Akum (though the latter people have by some been regarded as a section of the Lango tribe) are, on the other hand, apparently Hamitic.

With the possible exception of Westermann's work on the Shilluk, Mr. Driberg has produced the fullest account yet given to the public of a Nilotic people and their language. The linguistic part consists of a grammar and vocabularies, followed by twelve texts, with translation in parallel columns. The system of orthography adopted is as well adapted to convey an idea of the sounds as anything could be, short of a complete scientific analysis and the use of the International phonetic

script. It is to be noted that both quantity and tone appear to be important points in Lango phonology. The tales include several "Hare" stories, some of which are interesting variants of Bantu tales. "The Cherry-Pickers" is a version of the well-known *randonnée* theme of "The Exchanges" (cf. the final episode of Callaway's "Hlakanyana"); but the opening recalls the numerous stories in which a girl, separated from her companions, is carried off by a witch or demon (e.g., the Swahili *Waloto na Zimwe*). "The Hare and the Leopard" relates the incident of the two partners agreeing to kill their respective mothers (the Hare, as usual, cheating); examples of this have been reported from all parts of Bantu Africa and even outside this area. Meinhof explains this story as originally a nature-myth of sun, moon and stars; but it does not appear to me certain that the Ewe legend on which he relies for his interpretation is really connected with it. This collection affords a very good illustration of the elements which Bantu and Sudanic folk-lore have in common, while also exemplifying what seems peculiar to the latter. For instance, the bee, the hornet, the Colobus monkey and the chameleon (apart from the Origin-of-Death legend), never, or but rarely, occur in Bantu stories; and the python, though sometimes found, is not one of the most typical figures.

Mr. Driberg has accumulated such a wealth of information that it is impossible to do more than direct attention to some of the most important points, such as the very careful study of kinship and descent (it seems to be suggested that "at a remote period the ancestors of the Nilotes were matrilineal," but had become patrilineal before the Acholi and Shilluk had split off from the parent stock); the list of clan tabus (pp. 189-204); the treatment of wizards (*achudany*) who dig up corpses (p. 243), which curiously coincides with an oral account obtained in Nyasaland by Mrs. H. E. Scott, some twenty years ago; and the fact that twins are held in honour, as among the Awemba and some other Bantu tribes. Has any one attempted to work out the distribution of the two opposite, yet obviously cognate, views as to twins throughout Africa?

A. WERNER.

Evolution, Human.

Febvre.

La Terre et l'Évolution humaine. By L. Febvre. Paris: La Renaissance du Livre. 1922. 20.5 × 14.5 cm. Pp. xxvi × 472. Figs. 7. Price, 15 fr. **99**

This is part of an interesting series on Human Evolution, volumes on human origins, on prehistoric sequences, and on language having been issued. Volumes on various civilisations are in preparation.

The present work is critical and occasionally the criticism is very, perhaps unnecessarily, sharp as when the author deals with the weaknesses of the work of M. Demolins and his hasty, though often stimulating, generalisations. Febvre insists again and again that man is increasingly active in selecting and moulding his environment, but he hardly sees how environment works subtly upon man, affecting, as anthropologists believe, his bodily characters in many ways. Those who try to think in terms of anthropology and geography at the same time cannot but feel that we want to get right behind Febvre's arguments.

The too facile descriptions and classifications of "simple societies" get many bricks heaved at them in this book; the author rightly feels that social facts are of a very complex nature and he insists a good deal on this point. He does not spare another group of workers, namely those who map distributions of house-types, village-types and other things which, in his opinion, are too complex to be mapped as though they were indivisible units: in this connection the work of both Brunhes and Cvijic comes in for criticism.

His attitude is that the facts of environment do not dictate to man any one "necessary" course of action: they offer him various possibilities, of which he may take up one or more, but only rarely can he take up all.

The anthropologist cannot but react to the book in the sense indicated above by remarks on Febvre's neglect of the relation of environment to bodily structure. He may thus criticise, but it is well for him to feel the criticism that Febvre offers of his work. This is that in too many anthropological papers we get details of rites and ceremonies, of marriage customs and laws and so on, but only rarely are we told what food the people eat, how they get it, whether their social economy is destructive of forests, for example, and, if so, how the retrogression of the forest is affecting their life and the possibilities of cultivation. It is somewhat as if a scholar were to write of western European peoples on the basis of the fact that their religion gathers nominally around the gospels, and were to ignore the scramble for money and markets and power that is so important amongst us. The amplification of anthropological work in this direction is an important matter both because a better knowledge of the facts of daily life of peoples would help to clear up questions of origin and transmutation of ceremonial, and because attention to economic facts, land tenure, cultivation, exchange, houses, food and so on would go far towards ensuring that anthropology should be taught to men in training for administrative duties and, one would hope, also to some leaders of native life and thought in tropical lands.

H. J. F.

America, South: Ethnography.

Nordenskiöld.

Deductions suggested by the Geographical Distribution of some post-Columbian Words used by the Indians of South America. By Erland Nordenskiöld. 100
Gothenburg and London: Humphrey Milford. 1922. 18s. 6d.

Baron Nordenskiöld has listed, with maps showing the places where they were recorded, the words used by South American Indians for certain cultural elements introduced into America at the time of, or shortly after, the discovery. The lists and maps give the words used for the domestic fowl, the horse, the cow, the banana, iron, fire-arms and scissors, elements which were quite strange to the Indians at the time of the discovery; as well as for the partly new cultural elements, the knife, the needle, and the fish-hook.

From the nature and distribution of these words the author draws conclusions of great interest, both linguistic and cultural. In order to name the new objects obtained directly or indirectly from Europeans, the natives either borrowed (and modified) Spanish and Portuguese words, or made words of their own. Some of these were onomatopœic—such as the widespread *karaka* group of words for domestic fowl; only a few were actually descriptive; some expressed function; most commonly a name was found for the new object by analogy with one already known. Thus cattle and horses were "tapirs" and "tame tapirs," a needle was a "spine" or "spine with an eye." Scissors were unprecedented and hard to class; in the *Lingua Geral* they are assigned to the biting piranha-fish; the Páez call them *petenzú* after a bird with crossed tail-feathers. They are also named by special function—"fringe-cutter," "sheep-cutter" and the like.

The names for the new cultural elements, whether borrowed or invented, were passed from tribe to tribe along with the objects, generally in advance of the white men themselves. So, from the distribution of some of these words Nordenskiöld is able to trace the trade-routes which existed at the discovery, as well as the routes taken by the great post-Columbian tribal migrations. He shows, for instance, that the Quichua and Aymara had acquired a number of European culture-elements—domestic fowls, fish-hooks, probably iron and smallpox—by trade from the Atlantic coast before Pizarro's arrival from the west. The word *yetapa* for scissors (Chiriguano *hetapa*, "to cut the hair off the forehead") occurs also with the Guarani and the Guana, and, far away, with the Oyampi and Emerillon in Guiana. Baron Nordenskiöld says that quite possibly this distribution may be accounted for by extensive

post-Columbian migrations of the Guarani (p. 106), and supports this by historical evidence (pp. 143-47). All the historical notes are interesting and the whole book deserves careful study. B. A.

Psychology.

Smith.

The Measurement of Emotion. By W. Whately Smith, M.A. The International Library of Psychology, Philosophy and Scientific Method. London. 101
8vo., pp. 184. 10s. 6d. net.

This little work is a study of emotional changes, as revealed by the use of the psycho-galvanometer, in connection with word-association reactions. The method is of great importance to all investigators of individual psychology, and more particularly of psycho-pathology. The author shows that the reproduction tests is the best complex indicator, and that indirect personal associations are highly significant. The psycho-galvanic reflex serves as a criterion of personality, the correlation between the reactions of an individual on different occasions to a list of stimulus words being higher than that between the reactions of different individuals to the same list. Investigating effects of consumption of alcohol on reactions, the author finds a tendency to a more primitive, all or none, type. F. C. S.

CORRESPONDENCE.

Britain: Archæology.

Sheppard.

To the Editor of MAN.

SIR,—**The Discovery of Maglemose Remains in Hornsea, E. Yorks.** 102

Referring to the further note on the alleged Maglemose remains in Holderness described by Mr. Armstrong in MAN, 1923, 83, it must be regretted that Mr. Armstrong was unsuccessful in finding a harpoon during his researches in the peat deposits. His reference to myself, however, seems to be in the form of a grievance, which I should like to have removed.

I made the statement quoted in *The Naturalist* at the discussion at the British Association meeting last year, and I was backed up at the meeting by no less an authority than Mr. O. G. S. Crawford, and now that we have an illustration and particulars of the discovery of the alleged Maglemose axe, or adze, or "herminette" (call it what you will), I most emphatically reiterate everything I stated a year ago. We are now told that it was found "some years ago after a fall of cliff" containing large sections of mere deposits, amongst which the axe was lying. An important omission occurs here, however, namely, the name of the finder, which, if the axe is as important as Mr. Armstrong makes out, is surely a piece of information which might have been given to us. It has been admitted that it occurred amongst material which had fallen down from the cliff, therefore its precise relative position is unknown. Surely, in view of the extraordinary details which were given to us as to the precise position and depth of the alleged harpoons from Skipsea and Hornsea, anyone would be justified in stating that this particular axe had nothing to do with the Maglemose harpoons. Furthermore, we have in the Mortimer collection from various parts of the Yorkshire Wolds, flint implements quite as much "of the Maglemose type" as that figured by Mr. Armstrong. We get no peat beds on the Wolds, and, so far as I know, no evidence of Maglemose culture; so that to drag this particular specimen in with references to Mullerup and Sværdborg seems rather like straining, when comparisons might have been made with specimens from our own county. T. SHEPPARD.

PROCEEDINGS OF SOCIETIES.

Anthropology.

British Association.

Report of the Proceedings of Section H (Anthropology) at the Liverpool Meeting of the British Association, September 12th-19th, 1923.

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Section H (Anthropology) met under the Presidency of PROFESSOR PERCY E. NEWBERRY, who took as the subject of his presidential address, "Egypt as a Field of Anthropological Research." He dealt with the origins of Egyptian civilisation and showed that it was composed of elements which were certainly not all native to the soil. He held that it was the result of a meeting of the East and West—Libyans and Asiatics—in the Delta at a very remote date, long before the time of Menes. The address will appear in full in the Annual Report of the Association. PROFESSOR NEWBERRY also opened a discussion on "The Origin of Domesticated Plants and Animals." After dealing with the possible origin of the earliest known cereals and such domesticated animals as the sheep and goat, he dwelt on the importance for this subject of the study of the weeds associated with cultivated plants. Among those who took part in the discussion were PROFESSOR SIR WILLIAM BOYD DAWKINS, DR. STAFF, DR. W. BRIERLEY and PROFESSOR G. ELLIOT SMITH.

An organised discussion on "The Place of Man and his Environment in the Study of the Social Sciences," was opened by PROFESSOR J. L. MYRES in a joint session with Section E (Geography). (See below, MAN, 1923, 104).

Papers in *Ethnography* were more numerous than they have been for some years and in number and quality resumed the position on the programme which they held before the war. MRS. SCORESBY ROUTLEDGE, in a paper on "Mangarevan Folklore," described the written historical records, the domestic and mythical lore and the songs of the island. DR. A. C. KRUYT gave an account of the culture of the stone-using peoples of Central Celebes, which he analysed into the elements resulting from their contact with the aborigines on the one hand and with the betel-using peoples who introduced iron on the other. MR. W. E. ARMSTRONG gave a general account of the people of Rossell Island; MR. E. TORDAY brought forward evidence to show the extent and influence of inter-tribal commerce in West Africa even before the advent of the white man; MR. W. BONSER analysed the magic practices of the Finns, and suggested their relation to the magic of other Arctic peoples, and BARON F. NOPSKA described the house-building customs and house-implements of Northern Albania. An important communication from MR. L. W. G. MALCOLM, which suggested a possible connection between the doctrine of a plurality of souls in West Africa and in Egypt, was intended to form part of a larger discussion, for which, unfortunately, arrangements could not be made. MR. J. SAMPSON's paper on the early history and migrations of the gypsies was based upon recently collected specimens of the Syrian Romani, comparative study of which suggests the entry of an Indian tongue into Persia about the ninth century and a subsequent fission, one branch becoming the tribes of Egypt, Palestine, Persia and Transcaucasia, the other the western gypsies who spread over Europe from the Peloponnese about 1440 A.D. MR. E. TORDAY dealt incidentally with gipsy music in his account of Hungarian Folk Music—a subject, as he pointed out, of much importance to the student of early Hungarian culture and religious belief. This paper was accompanied by vocal and instrumental illustrations, the latter being provided by a band of Hungarian gypsies whom Mr. Torday had brought from Budapest for the purpose.

PROFESSOR E. EKWALL's paper on Lancashire place-names, which contained some interesting conclusions as to the part played by Briton, Anglian and Scandinavian respectively in this area, was particularly instructive for students of place-names in its corroborative use of archaeological and historical evidence.

Archæology.—Two communications were of outstanding importance. Of these, a lecture by SIR ARTHUR EVANS on "Crete as a Stepping-Stone of Culture" was

based upon a survey of Cretan civilisation as a whole, but included evidence from the recent important discoveries made by him in that island. He referred in particular to the great prehistoric road to the south coast which facilitated communication with Egypt back to predynastic times. The second was a paper by PROFESSOR W. J. SOLLAS on "Miocene Man," in which he gave the results of a careful examination of a large series of flints collected by the late Mr. Westlake of Fording-bridge at Aurillac (Cantal) in France from late Miocene deposits, and of a personal investigation of these deposits and their associated flints. PROFESSOR SOLLAS is disposed to regard a proportion of the flints as humanly fashioned on the ground that he is unacquainted in this area with any natural forces by which their shaping could be produced.

Other communications dealing with the archæology of the Mediterranean and adjacent areas were MR. STANLEY CASSON's accounts of excavations on Bronze Age sites in the North Ægean, of which little is known before the Iron Age, and on prehistoric sites of Neolithic or Chalcolithic Age on the Bosphorus and Dardanelles, which appear to link up with and add to the importance of Troy I. PROFESSOR BRODIE BROCKWELL discussed early systems of arithmetic in Mesopotamia, Egypt and Greece, and suggested that discrepancies in dates and computations of periods of time were due to the use of modern systems which were not applicable.

In British Archæology a group of papers dealt with the pre-history of Wales. PROFESSOR FLEURE's general survey laid stress on the special difficulties with which workers in this area had to contend, particularly in connection with dating; DR. R. E. MORTIMER WHEELER gave an account of the hill-forts of North Wales and their historical background; MR. I. T. HUGHES described his work among the hill-forts of Carnarvonshire; and MESSRS. R. THOMAS and E. DUDLYKE described a prehistoric flint factory at Aberystwyth.

MR. DE BARRI CRAWSHAY gave an account of the life and work of the late Benjamin Harrison and also described some recent finds from the Ash Pit near Sevenoaks.

Ethnology.—One paper only was offered. MR. T. H. WALKER's communication on the races of the Middle East dealt with the distribution of the cephalic index in that area.

Sociology.

Myres.

The Place of Man and his Environment in the Study of the Social Sciences. *Being the opening communication in a joint discussion in Sections E and H of the British Association at a meeting held on September 14th, 1923. By Professor J. L. Myres, M.A., F.B.A.* 104

The subject proposed for discussion illustrates the haphazard way in which a Science of Man comes into being. This is partly an accident of terminology, for the term which we might have expected to be used for the scientific study of human life is *biology*; the word *bios* in Greek meaning specifically *human* life, in contrast with *zoë*, the life of animals and plants. But *biology* having been appropriated by the zoologists, long ago, while humanists slept, we are restricted to two words, *anthropology*, which gives its title, for example, to a section of the British Association; and the monstrous hybrid *sociology*, for that part of general anthropology which deals with the behaviour of men in societies.

But *anthropology* is not always regarded as covering the whole of the study of man in his environment. Otherwise, how does it happen that there are three other sections of the British Association dealing wholly with aspects of human behaviour, and a fourth, geography, very largely concerned with "man and his environment." Seeing that man is above all else a mind-using animal, why is there a separate "Section J, Psychology," to deal with the science of mind; and why was this section an off-shoot, not of "Section H, Anthropology," but of

"Section I, Physiology"? Seeing, again, that man is using his mind in the most specifically human way when he is estimating and adjusting *values*, how comes it that the science of values has its own "Section F, Economics"; or finally that we find "Section L, Education," standing side by side with the "pure science" of Psychology somewhat as the "Section G, Engineering," stands for applied science alongside "Mathematics and Physics"?

The explanation of these anomalies is partly historical. In the earliest days of the British Association, all "biological" science fell into one and the same section. But already, in 1833, there was a separate section of "Statistics," then a new and growing study in this country (though the Statistical Society was not founded till the following year); and this section has always retained something of its original quality as representing "mathematics applied to affairs"; its title has no mention of "Economic Science" until 1856. On the other side, human "biology," in the sense of "anatomy and medicine," was separated from zoological and botanical studies in 1835; but this section was re-named "physiology" in 1841; and though re-absorbed into "Section D" from 1847 to 1894, is the forerunner, not of anthropology, but of the present physiological section and its offshoot, psychology; for it should be noted that "experimental psychology" was included in its subtitle. The present "Section H" has a different lineage. It was only in 1846 that "Section D, Zoology" just before reabsorbing "Physiology," initiated an "Ethnological Subsection." This was extended to include Geography in 1851, and became the present Section E; and it was only as a fresh offshoot from this very popular section for explorations and travellers' tales, that "Section H, Anthropology," was instituted at Montreal in 1884. It will be clear from this retrospect that the present distribution of the Human Sciences among the sections has resulted rather from the accidents of personality and convenience than from any clear notions as to the content of the "Science of Man"; and it must be left to the economists to explain why "Section F" has never enlarged its conceptions of "value" so as to include Moral and Political Science; which (to judge from some recent events) seem to run some risk of becoming foster-children of "Section L, Education."

But there are other reasons for such anomalies, besides these temporary accidents. Multiplicity of standpoint, and overlap of organisation, are not confined to sections of the British Association. They meet us at every turn; in the titles of learned societies; in the public bewilderment as to their respective scope and functions; in the precautions with which Universities inheriting ancient Faculties of Letters, Science, Law, and other bodies with more or less clear-cut programmes of their own, confront proposals for "anthropological" and "sociological" studies; not least, in the proceedings of that instructive conference which was convened at Oxford in 1922 by the Sociological Society; and to this the present discussion is in some measure a sequel. The object of that conference was better correlation between Sociology, as understood by the conveners, and other studies most closely akin to it. Representatives of these other studies illustrated aspects of the "sociological" problem, to which their own materials and methods were relevant, and contributed between them a survey of the whole problem which may be summarised as follows.

Geographers describe themselves as interpreting human activities, in their distribution among other factors making up the world as we know it, as man's reaction to his environment. They recognise human "initiative" as a geographical factor of great and increasing significance; but they are concerned with its distribution and its effects, rather than with its cause, its nature, or its aims.

Biologists, that is to say investigators of the nature and effects of life generally, assuming that Man's higher functions may be interpreted by the same "biological" methods as those of other living beings, seem to regard sociology as a special and

difficult extension of general biology, or supplement to it, in respect of an exceptionally gregarious or symbiotic species. They offer an undesigned rejoinder to the recent "aside" of Professor Breasted: "I have often wondered what there is unnatural about Man."

Psychologists, too, though primarily concerned with the behaviour of individual minds, and with the subjective aspect of this behaviour, find themselves involved in the study of social behaviour as the objective aspect of the desires and thoughts of individuals during lifelong association with each other; and they take account of evidence supplied by customs, institutions, and handiwork, as well as by ideas explicitly formulated in speech or literature.

Anthropologists are concerned with the social achievements of men attempting to satisfy their needs in any given situation, no less than with their implements or their decorative art. For this reason, as the President of this Section told us at Hull last year, anthropologists draw no frontier-line between savage and civilised behaviour; a modern city, with its multifarious equipment for a common mode of life, and its clearer realisation of needs, and of the means to satisfy them, is no less an objective manifestation of its inhabitants' aspirations and efforts than the camp-fire or cave-dwelling of the most primitive family. It is a matter of tactics, not of strategy, if the earlier anthropologists devoted themselves especially to modes of behaviour which are rapidly disappearing, since in some respects they offer more elementary and fundamental information about Man's modes of maintaining himself.

Historians, in the same way, are more specially concerned with the sequence of human experiences and achievements, whenever such sequences can be ascertained. But the historian's pre-occupation with events which can be dated in order of time does not preclude him from comparative study of the doings of a "remembering animal," applying past experience to anticipate needs foreseen as imminent, and extending control over non-human conditions, even where these processes cannot be accurately placed in a chronology. So far, however, as historians are pre-occupied by their study of sequences in time within particular regions and environments (where their province overlaps that of the geographers) there is scope for a systematic science which might be called "sociology" if this name has any advantage over that long-established phrase "the philosophy of history."

Other studies represented at the Oxford Conference, such as economics, jurisprudence, and "political science" in the commonly accepted sense, are more specially concerned with particular kinds of behaviour in human groups; law, for example, with what one speaker described as the "Human Laws of Motion"; economics with the "Laws of Value," and so forth.

It was less easy to discover the precise scope of "sociological" studies themselves. Sociology is in any case one of the methods by which the problems of human behaviour can be studied as a whole. It is the study of Man-in-Society. But its exponents seemed to differ as to its affinity to one or other of the two groups of sciences dealing with humanity. On the one side, the neighbouring "biological" sciences, anthropology and psychology (and geography so far as it is concerned with Man and his environment), claim to interpret human behaviour and achievement objectively, through the same general conception of *development* as is applied to such non-human occurrences as the growth of animals and plants, or the effects of rain and rivers. On the other side, what were formerly called the "humanities" or the "moral sciences," politics, morals, economics, æsthetics, and those aspects of history which deal with the same kinds of behaviour, admit concurrently with "development," or else more or less explicitly substitute for it, the conception of *value*, and therewith subjective criteria; however strictly economists or politicians may define the kinds of "value" to which they limit their inquiries.

Now, is sociology, as a study of human associations generally, concerned primarily with their *development* or with their *value*? In other words, is it a "pure" science, akin to other branches of natural science, in which case its task is to interpret behaviour in terms of "development" merely, including of course in its survey the development and distribution of man's needs, aspirations, and ideals; but discarding all criteria of "value"? Or is it an applied science, in the sense in which all the old "moral sciences" were "applied" sciences, and in which Heraclitus called his essay on Man "exact guidance towards an estimate of life"? Or, thirdly, is Sociology not one of the "special sciences" at all, but akin to that aspect of Philosophy which is concerned with the meaning of human ideals and behaviour; standing in fact in the same relation to Anthropology or History as Metaphysics stands to Physics or Astronomy?

The problem may be illustrated from the parallel problem presented by the study of Man's dealings with the material world. Technology (including its retrospective aspect, archæology) is a historical science, applying the conception of development to Man's various reshaping of material objects. But as all artefacts represent attempts to satisfy needs and desires, they may be examined also with reference to the conceptions of different kinds of value; and in this respect are the subject-matter of Economics and Æsthetics; which form estimates of the utility and beauty of Man's handiwork. But once admit this conception of value into technological study and it becomes an "applied" science, competent to formulate industrial or artistic *rules* to guide the decisions of modern craftsmen. In the same way, Sociology or Social Science examines man's dealings with other men. In so far as it interprets them in terms of development, it is a "pure science" among other historical sciences, and indistinguishable from what is sometimes called Social Anthropology, except that the one has hitherto specialised in modern and civilised behaviour, and the other in ancient and barbaric. In so far, however, as it employs the conception of value, it passes away from anthropology and becomes a branch of Political and Moral Science; forming estimates of the utility and goodness of institutions, and guiding the decisions of the statesman and philanthropist. Here, too, once admit the conception of value into sociological study, and it becomes an applied science; a kind of Human Engineering, standing to Anthropology somewhat as Education stands to Psychology.

The objection might be made at this point, that since Sociology, or Social Anthropology, is concerned with the behaviour of beings who are self-conscious (more or less) and capable (more or less) of estimating the "value" of the behaviour of themselves and their like, on standards political and moral, its own conception of development must include the development of this capacity to estimate values; and that such a conception of development as this involves some conception of value. But it is difficult to see how the fact that the behaviour in question is moral or political behaviour exempts it, so far as it is an objective occurrence at all, from examination by the same methods, and in relation to the same general conception of development, as any other process going on in the world about us. However bad an action may be, in the moral judgment of this or that society, its place in the statistical record of behaviour in that society is unaffected by our judgment of its badness; or if it is so affected, there is an error of observation, or a "personal equation" which mars the scientific accuracy of the record. We have travelled far from the Elizabethan translator of Herodotus, who bade his readers, in the margin, "observe the beastlie devices of y^e heathen." Certainly no anthropologist would exclude from his survey of any people so specifically human a character as their moral code, or consider that in examining the geographical distribution of political institutions or in correlating them with other elements of the culture to which they belonged, he was permitting his own opinions in politics or morals

to affect his statement of the facts; any more than a geologist who would risk his life to save his dog from accident allows himself to be influenced in his study of fossil fishes by pity or indignation at the massacre which has provided his specimens.

If then it is impossible to draw a line in point of method or material between sociological and other inquiries which make up the Science of Man, so long as Sociology is regarded as a branch of science at all, the question at issue, of "the place of Man and his Environment" in the study of the Social Sciences, would seem to have answered itself. There is no special method for the study of social occurrences, any more than there is for the study of human bones or Polynesian art. To speak, as sometimes happens, as if the application of "historical method" to the study of social institutions were a new discovery, is a misapprehension. You cannot study fossils historically, until you have collected many fossils, determined their morphological characters, and plotted their geographical distribution; only then is it profitable to speculate about evolution of species *in situ*, or migration of them into a region. So too with Man. Discovery, description, analysis of culture into constituent elements, comparison and classification of these undertypes and their varieties, were necessary preliminaries; but the "historical method," inapplicable strictly except to material accurately described by observers trained in the morphology and physiology of societies, has nevertheless been employed as a matter of course by anthropologists from Herodotus onwards.

But we must consider the other alternative; a "sociology" (to use this word for it until we can find a better) wherein the study of behaviour does not exclude judgments as to the value of the behaviour which is studied; where it is possible to disapprove "the beastlie devices of the heathen," or to commend the honesty, the veracity, or the taste, of this or that people. Such judgments of value are made with reference to an ideal and a purpose of their originators; and they have their analogues in other branches of knowledge. The zoologist makes judgments as to the qualities of a cow, with reference to a process of objective development, of increasing complexity as well as regularity of response to processes in a cow's environment; he may speak of a normal or a healthy cow, but not of a good or useful cow. That is the prerogative of the farmer and the breeder of cows; knowledge of cow-zoology the farmer and the breeder must have; but for them every zoological observation is the occasion of a judgment of cow-value; and is relative to their own idea of what a cow is, for their own purpose in cow-keeping or cow-breeding. Similarly the metallurgical chemist is concerned with the conditions under which this or that kind of steel is formed, and with the factors in the environment of any piece of steel which conserve or alter its properties; but he cannot, as a chemist, speak of "good" steel; that is the engineer's judgment of its value for his purpose, whatever it may be. So, too, in the "social sciences." In so far as they are pure sciences—as anthropology or biology are pure sciences—they trace connections between elements of behaviour, but they have no place for judgments of value. Those judgments are the conclusions not of a "pure" but of an "applied" science, with an ideal and a purpose—namely, to make better men, or to make men better,—as clearly defined as is that of the breeder who makes better cows, or the engineer who makes steel better, or provides against the risks of strain. But let us make no mistake; this is not anthropology any longer, but the "applied science" of human behaviour; and its generic name is *philanthropy*.

There is, of course, no reason why the conclusions of anthropology should not be so used, for a purpose and a practical end, any more than those of mathematics or chemistry; and there is little doubt that in the study of man, as in the study of cows or of steel, great advances in method are stimulated and great additions to knowledge are won, when the practical urgency of research is realised, and the

resulting discoveries are applied to political or economic ends. In almost all the sciences we are living in such a period now. There are obvious drawbacks, however; the well-known risks of payment by results; the encroachments of training on research, of administrative or political interference even with the field of observation. The long history of the Humanities is a catalogue of such interruptions of what might have been a "Science of Man," in the supposed interests of beginners in philanthropy. All the greater crises in the growth of modern ethnology have their counterpart in the world of affairs; in the struggle for the supposed rights of man, the supposed rights of nationality, the supposed rights of this or that class of people. Usually the discoverers themselves are the last persons to realise whence their inspiration came; only the historian of a science, as of a movement, gradually becomes aware of the considerations which affected them unconsciously. But it is some gain to know that such things happen; forewarned is forearmed.

Against such undesigned perversions of scientific method and practice, in any department of learning, the surest precaution is intercourse, on the plane of pure science, between observers in different fields. For the chances are that the stress of the demand for practical applications in different subjects will not be wholly in the same direction at the same moment; and comparison of procedure even between subjects that are nearly related, serves to detect divergencies of outlook, and challenge revision of methods and conclusions. It is for this reason that a conference such as that at Oxford last year, or our discussion to-day, is helpful.

In particular, three adjacent lines of inquiry, among those mentioned at the outset, are in a position to contribute something to the Social Sciences. Modern geography has formulated a method for analysing the factors in the non-human environment of any society, and estimating the extent to which these factors restrict man's freedom to do as he likes with external nature. Modern psychology has made in the last few years great advances towards an explanation of those internal factors in the structure and living processes of every one of us, which prevent the great majority of men from ever being fully masters of themselves, however confidently they seem to con their own ship on the sea of life. And modern anthropology has illustrated, by some striking examples, the stranglehold of social observance on the freedom of an individual to shape his own course at all; no less than the disastrous results of rupture of those leading-strings of custom, in the clash of alien cultures, or exposure to changes among external circumstances more abrupt or sudden than are compatible with social adjustment.

It has been, for example, a wholesome corrective to that evolutionary optimism which characterised so much of the best work of nineteenth century ethnologists, to be confronted with examples of what it is customary to call degeneration, but what a stricter method should describe as adaptation to austerer conditions, less wide range of achievement; as in the local retrogression of communities on oceanic islands from more complex to simpler varieties of the culture which they inherit. It has been probably a revolution in anthropological method, that comes from experience of the effects of exposure even of apparently sane, healthy, educated men to the hell of irresistible, uncontrollable violence which is characteristic of modern war; for it has suggested ways of eliciting what an awestruck person is really experiencing, and gives for the first time a reasoned account of the behaviour of "panic" and "avoidance." And it is no accident that three of the pioneers of this kind of research served their apprenticeship, and won their spurs, in the Cambridge Expedition to Torres Strait.

These are aspects of scientific method, in which those who study the more complicated reactions, and the more violent crises, of modern nation-states, have everything to gain from the experience of the psychological laboratory, from the field-study of the simpler forms of society, and from the geographer's insistence

on distributions and an accurate notation for them; as important an aid to the comprehension of what goes on in any region, as the statistician's tables and formulæ, for what occupies a period of time. It will be easy to multiply examples; less easy perhaps to detect precisely what is wrong in the methods employed, where they diverge and lead to different conclusions. But the gain from the wider outlook is obvious; it may even help to settle the place both of Man and of Environment in the study of the Social Sciences.

J. L. MYRES.

In the discussion which followed the reading of this paper, the argument was somewhat one-sided, as none of the accredited representatives of the sociological point of view who had undertaken to take part in the discussion were able to attend. The discussion was opened by PROFESSOR FLEURE, who pointed out that the Association was, perhaps, apt to divide sections too freely; but it was good that they should meet together. It was not desirable to define border lines too strictly. There was a discipline of type - anthropology, a discipline of place - geography, and a discipline of time - history. Although anthropologists and geographers might assist in matters affecting values, it was their duty to steer clear of them in their own work. MR. L. HUXLEY said the question of values was one of the most difficult and interesting of the questions confronting the biologist. In evolutionary biology, which might be regarded as furnishing a link between the two distinct methods of study, the objective method furnished evidence as to the direction of progress; this line of direction might then be compared with a scale of values. An examination of values by the objective method would furnish a history of values, giving the direction of modification, which could be used normatively in politics and practical sociology. DR. MARION NEWBIGIN, while regretting the absence of Professor Geddes, put forward certain points which might have been made by the sociologists. The question of overlap was not of importance so long as sociology could show a special method. It might not be a pure science, but a pure science does not exist. Man was not pure science, but human. PROFESSOR ROXBY suggested that while anthropology dealt with varieties of races and their qualities, and geography studies the outcome of life in a particular area, sociology's aim was to build up a conspectus of life. MR. THOOTHY reviewed in more or less detail Professor Geddes's approach to the study of sociology on a biological basis, and his endeavour to establish "norms." SIR WILLIAM BEVERIDGE said that he was not a sociologist, nor was he clear as to the meaning of the term sociology. Huxley, seventy years ago, had classified the biological sciences in various stages from abstraction to complexity; beyond the biological sciences was sociology, the science of man in Society. What was wanted was not one, but a group of social sciences. There were groups of facts, such as, for example, politics, which could be studied objectively. The social sciences, in so far as they were pure sciences, should deal with development and not value, and should use the method of science, observation and experiment. This group of social sciences might best be developed if attention were concentrated on the border lines.

PROFESSOR MYRES in his reply indicated that he had not intended to ignore the objective study of values, referring to Dr. Malinowski's recent work on economics in the Eastern Pacific, and emphasized the value of border-line studies.

Prehistoric Society of East Anglia.—A meeting will be held at the Rooms of the Geological Society, Burlington House, Piccadilly, W. 1, on Wednesday, October 10th, at 2.15 p.m., when Mr. Bury will deliver his Presidential Address on "Some Aspects of the Hampshire Plateau Gravels." Among other papers, Mr. M. Burkitt will describe "A newly-discovered Transition Culture in North Spain."

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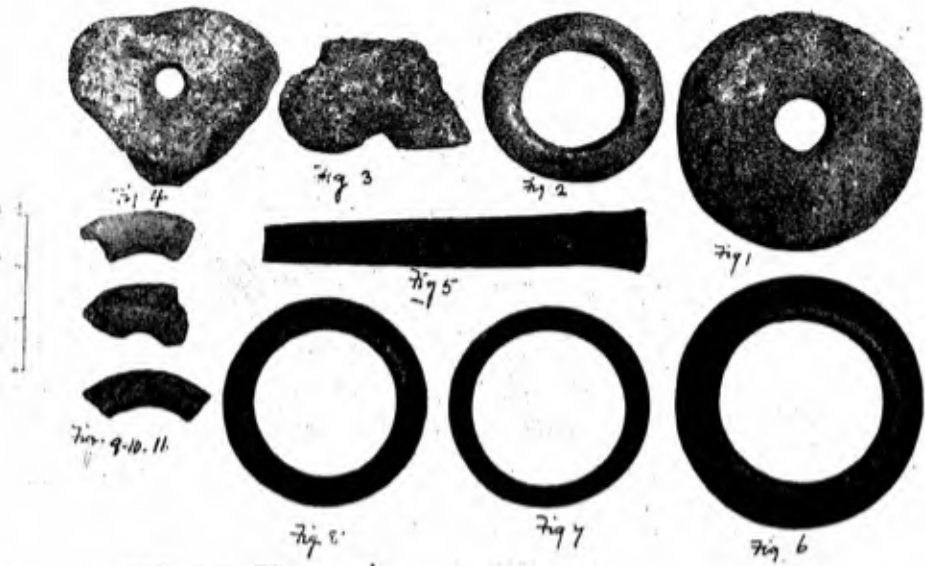


FIG. A.

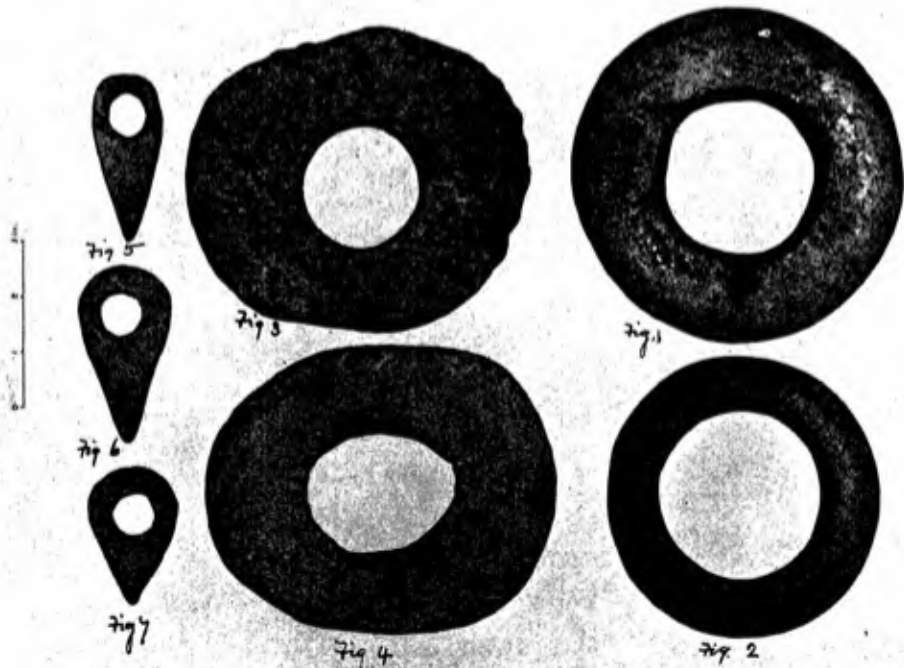


FIG. B.

ORIGINAL ARTICLES.

With Plate M.

Africa, West: Armlets.

Cardinall.

Stone Armlets in the Gold Coast. *By A. W. Cardinall.***106**

Elbow rings are worn by most of the Northern Territory natives of the Gold Coast. They are usually made of a black marble veined with white and are brought down from the French Soudan by Moshi traders. Their value in the markets is from 4s. upwards, the price increasing in proportion to the amount of white in the stone. I have only seen one white one. The owner had paid eight sheep for it—approximately £5!

Similar rings are made by the natives themselves in the hill country of North Mampussi, by the Kassena, and formerly by the Talansi. Various stones are used.

The illustrations show rings in process of manufacture and fragments, as well as some perfected specimens. In Plate M., fig. A 1 is of micaceous sandstone; it resembles the so-called "sinkers." Both figs. A 1 and A 2 have had the exterior rubbed and fashioned roughly to the shape they would have eventually taken. Fig. A 3 was picked up by me in a farm—it was evidently a weather-worn fragment that had been broken in the early stages of manufacture. Fig. A 4 would probably have eventually become one of the stone finger-rings shown on Plate M., fig. B.

Fig. A 9, 10 and 11 are mere fragments, picked up by me on the roadside, and are all local specimens.

Fig. A 6 is a perfect specimen. A criss-cross pattern has been roughly cut on its rim as a further ornamentation. Fig. A 7 is a finer specimen, of black close-grained stone. Its outside edge has been rubbed away until it is almost flat. I managed to procure one quite flat from a Kusanga (pl. Kusasi), who said it was of local manufacture, but that now-a-days no one made them. It was stolen from me. Fig. A 8 calls for no especial remark.

It is to be noted that these locally manufactured rings are usually smeared in shea-butter until they have a black appearance.

On Plate M., figs. B 1 and B 2 are of interest. They are war elbow-rings. Fig. B 2 was used by a Bura (pl. Builsa) in the wars against Babatie. Fig. B 1 is in process of manufacture. They are both of steatite, and their weight—2 lbs. 14½ oz. and 1 lb. 10½ oz. respectively—is meant to increase the blow of a battle-axe. Figs. B 5, 6 and 7 are finger rings, worn usually on the middle finger. I bought fig. B 5 from its owner, who could not understand my being so foolish as to buy a mere stone which anyone could fashion. Figs. B 6 and 7 are in process of manufacture. They are all three of steatite, but fig. B 5 is considerably tougher and grittier than the other two.

The method of making these implements is simple. Fig. A 5 shows a new iron implement, which is either a hoe, or an axe, or a drill, according to its owner's wishes. When a stone is found of a suitable shape, its edges are rubbed on harder rocks until it begins to resemble more closely the ring which is intended. Small boys are set to work to wear away the centre, and this is done with the implement shown, the boy wearing away first one side, then another. He will even give taps to chip out pieces, but most of the time the work is rubbing.

Figs. B 3 and 4 are of steatite, a very soft stone. They are not finished, however. They would have been measures to fit on girls' elbows to judge the size for arm-rings of ivory, which are in general use among all the Dagomba-speaking tribes.

A. W. CARDINALL.

Ægean: Archæology.

Casson.

Mycenæan Elements in the North Ægean. By Stanley Casson, M.A. 107

Mycenæan culture in the lands that border the north coast of the Ægean Sea must of necessity be intrusive. In Thessaly, where as complete researches as can be expected have been carried out, the Mycenæan period is clearly, if scantily, represented.* North of Thessaly, in Macedonia and Thrace, which still remain almost unexplored, some meagre traces of Mycenæan culture have been found. In view of the possible exploration and excavation of these regions in the future it may be convenient to summarise what records there are of the Mycenæan period.

The plains bordering the Thermaic gulf contain a very large number of tumuli of prehistoric date. These tumuli were known and reported upon, as far as conditions allowed, before 1914.† During the war efforts were made to record and classify them upon a more scientific plan.‡ A complete and exhaustive survey remains yet to be done. West of the Vardar and Haliacmon plains few records are obtainable. Tumuli are known to exist in the plain of Monastir,§ but have not been adequately examined. Eastwards the coastal plains are better known. Here mounds are rare: a few belong to the Struma region, and some are known round Mount Pangæum, but after this point they practically cease until the Maritsa is reached. At Enos, at the mouth of the Maritsa, there is a large tumulus, and higher up, north of Adrianople, begins the Bulgarian series. From what has been discovered by excavation, however, of these Thracian mounds they appear to belong exclusively to the Neolithic or Chalkolithic period. A mound of this period has been excavated in 1920, 1921 and 1922|| by the French near Philippi, thus pushing the eastern boundary of this culture up to the Struma. The group of mounds of the

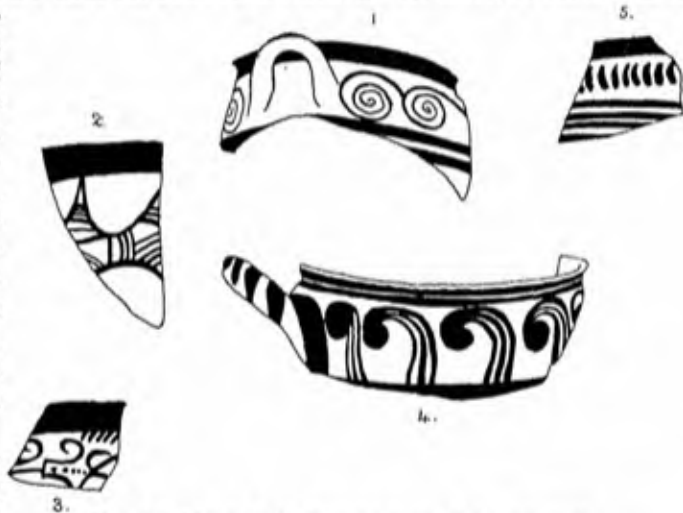


FIG. 1.—MYCENÆAN POTTERY FROM MACEDONIA.

Nos. 1, 2, 5 from Sedes; Nos. 3, 4 from Gona.

See Rey's "Premiers Habitats de la Macédoine," Pl. xlvii and xlviii, and p. 248, Fig. 46.

Thermaic gulf region thus remains by itself and self-contained, related only, perhaps, to the Monastir group. From what is known of the pottery and other remains found in these tumuli connection is to be sought rather with the north-west than with the north-east, and the Vardar valley as a means of connection is indicated. The pottery of the Thermaic tumuli is mainly incised, and there are

* Wace and Thompson, "Prehistoric Thessaly," p. 206-8.

† Wace, *B.S.A.*, XX, p. 123. Wace and Thompson, "Liverpool Annals," II, p. 159 ff.

‡ Rey, "Observations sur les Premiers Habitats de la Macédoine," 1921. Casson and Gardner, *B.S.A.*, XXIII, pp. 1-43. Picard, *B.S.A.*, XXIII, p. 1. Casson, *B.C.H.*, 1916, p. 293. Woodward, *B.S.A.*, XXIII, p. 51.

§ "Rey," *op. cit.*, p. 172.

|| *B.C.H.*, XLIV, p. 407, and *J.H.S.*, XLI, p. 268. For pottery found here before the excavations see Welch, *B.S.A.*, XXIII, p. 44ff. The pottery from this site cannot, of course, form any basis for the classification of pottery from Central Macedonia, where this culture does not seem to have spread.

no traces of the clay figures and statuettes that are so characteristic of the painted pottery culture of Thrace, Bulgaria and the north-east.

Highly elaborate incised pottery lasts apparently into the full Bronze Age in these regions, and painted pottery is rare and of a completely different type from that of the eastern group.

Before any examination can profitably be made into the chronology and nature of this Macedonian Bronze Age some attempt must be made to ascertain the date and character of intrusive Mycenæan elements.

Mycenæan ware is recorded from nine mounds in the plains of the Thermaic gulf. These are as follows:—

(1) Gona mound, south-east of Salonika, near the Agricultural College. Here the French, who sunk trial trenches during the war, record an actual Mycenæan stratum; see Rey, "Premiers habitats de la Macédoine," p. 141, No. 12 and p. 149 "couche B." (Pottery found in this stratum is shown on plate XLVII). Mycenæan sherds were picked up by Wace in 1912. See *B.S.A.*, XX, p. 127, mound B.2. This mound is in a marsh on the sea-shore.

(2) Sedes mound. A few kilometres east of Salonika. Excavated by the French, who record a similar "Mycenæan stratum." Rey, *op. cit.*, p. 154 and Plan XXI. Wace and Thompson, "Liverpool Annals," II, pp. 161 and 158.

(3) A mound just east of the village of Vasilika in western Chalcidice. Pottery recorded by Wace, *loc. cit.*, mound B. 7. See Rey, *op. cit.*, p. 129, No. 2.

(4) A mound at Gidi Dere near Yili. Wace, *loc. cit.*, mound B.10. Rey, *op. cit.*, p. 162, No. 3. This mound is on the west coast of Chalcidice.

(5) A mound at Karydia (called Kardia on the Austrian Staff map). Wace, *loc. cit.*, mound B. 11. Rey, *op. cit.*, p. 162, No. 4. This mound is also on the west coast of Chalcidice.

(6) A mound at Trapezi. Wace, *loc. cit.*, mound B. 16. Rey, *op. cit.*, p. 162, No. 7. This mound is also on the west coast of Chalcidice.

(7) Kalamaria mound just outside the east walls of Salonika on the first foothills from the shore. The same mound as Wace's Hagios Elias, *loc. cit.*, mound B. 1, and Rey, *op. cit.*, p. 100, No. 3, and Plan XV. No Mycenæan ware is recorded from here by either Wace or Rey, but in the course of several examinations of the mound during and after the War I have found many fragments of Mycenæan ware in the upper strata.

(8) Lembet mound. Wace, *loc. cit.*, mound B. 21 (called wrongly Karaissi mound). Rey, *op. cit.*, p. 105, No. 4. The mound was excavated by Macridy Bey in 1908 in the belief that it was a Hellenic burial mound of the type common in the Vardar plains. No record of stratification has been preserved. The mound is large and conical and is adjacent to a town site of the classical period. It has not been systematically examined.

(9) Arapli mound, on the left bank of the Galliko (ancient Echeidoros). Wace, *loc. cit.*, mound B. 24. Rey, *op. cit.*, p. 88, No. 13. I examined this mound in 1913 and found the usual hand-made wares. Wace found Mycenæan ware in addition.

(10) Chauchitsa. In excavating a mound at the back of the Iron Age cemetery at this site I found, in a stratum below a thin deposit of the Iron Age, one small fragment of wheel-made pottery, painted with glaze paint which those more competent to judge than myself pronounce to be Mycenæan. It was found in association with elaborate hand-made incised wares and hand-made painted wares of fine quality. This mound is one of the most northern in the Vardar plains, and lies nearer Lake Ardjani, some 40 miles due north of Salonika. A full record of the excavation will be published shortly.

Of these ten mounds all but Nos. 3, 8, and 10 are practically on the sea-shore. No doubt Mycenæan ware is to be found on many of the other mounds of these plains, but it is doubtful if it will be found far inland. The occurrence of only one fragment at Chauchitsa in a wide area of excavation is significant. On the other mounds it is by no means rare. It seems probable, then, that Mycenæan imports were purely local, derived by trade along the sea route from the south to the Thermaic gulf. It seems uncertain what merchandise can have tempted Mycenæan traders to these parts. There is no evidence as yet that the gold of

Pangaion or the silver of Dysoron had yet been exploited. Perhaps the wood of the forests of Chalcidice was the commodity that was sought after.

All the Mycenæan sherds found belong, with one exception, to the close of the third Late Minoan period. The exception (*see* Fig. 1, No. 4) is too finely executed to belong to the already decadent technique of the end of the thirteenth century B.C.

If, on the basis of the pottery evidence given above, the period of Mycenæan influence in Macedonia is put during the century 1300-1200, this will not, I think, be too generous an estimate for what was obviously a short period of exploitation.

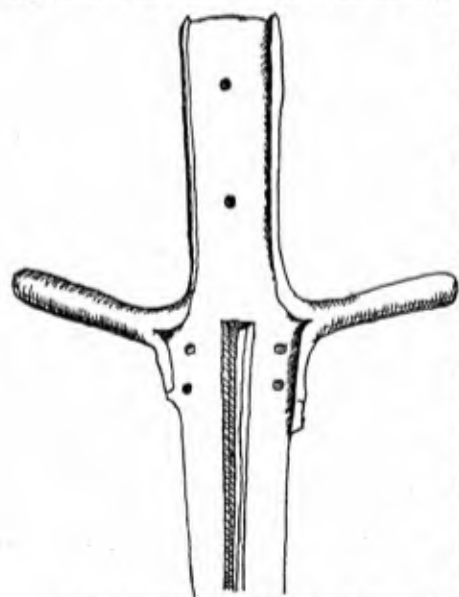


FIG. 3.—RAPIER FROM KARAGLARI.

Similar types were frequent in the graves at Petsofa in Crete.* They may have reached Grevena either by way of the Haliaemon valley from the Vardar plains, or else by way of Thessaly. The former seems the more probable route. Their

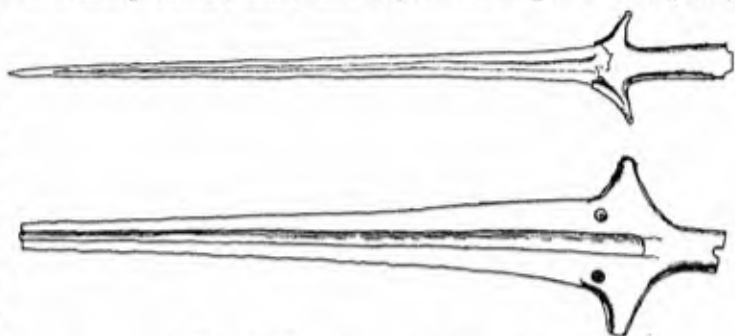


FIG. 2.—RAPIERS FROM GREVENA.

To quite a different category of evidence for Mycenæan influence in the north Ægean belong two fine rapiers (Fig. 2), which come from Grevena on the upper waters of the Haliaemon. They are now in the prehistoric collection of the Naturhistorisches Museum at Vienna, by the kind permission of the Director of which I am allowed to publish them. The smaller of the two measures 37.5 cm., the larger 56 cm. in length. Unfortunately no further information as to their provenance or as to the circumstances of their discovery is available. They must, however, be taken into consideration in estimating the value of the few scraps of evidence that are accessible to us. Both belong to the type of Mycenæan rapier common in the last two Minoan periods.

* Evans, "Prehistoric Tombs of Knossos," p. 106, Fig. 40 and Pl. 91.

date and type in no way conflicts with the conclusions suggested by the evidence of the pottery.

With these Grevena rapiers must be associated a third (Fig. 3) of almost the same type. It is complete, except for the handle grips, which were probably of bone or ivory. It was found at Karaglari near Panagyurishte in the central Bulgarian plain, about half way between Sofia and Philippopolis and is now in the National Museum at Sofia. I am allowed to publish it here by the kind permission of the Director of that Museum and of Dr. Kazarow.

The rapier seems to have been a chance find, but there was also found with it a bronze spear-head of a Mycenæan type. The length of the rapier is 77.5 cm., and its width at the handle 11.5 cm.

This weapon is farther outside the area of Mycenæan penetration than are those from Grevena. It must have been carried in the course of trade along the Struma Valley up the Kresna Pass to the head waters of the river and so to the Maritsa plains. It is thus one of the earliest products of a route which later, in the sixth century, became one of the principal trade routes tapped by Thasos. Certainly hoards of early Thasian coins are common in central Bulgaria.*

All three weapons form a counterpart to the weapons of Central European type which are found occasionally on Mycenæan sites in Greece proper. They testify to the balance of trade on the northern boundary of the Mycenæan Empire before it finally fell to the invader.

East of the Vardar and Struma plains no traces of Mycenæan culture are recorded along the whole of the European shore. Just as the area of the Bronze Age of Macedonia seems to have stopped just east of the Struma, so the coastlands to the east of that boundary probably remained undeveloped by the Mycenæan traders and the next port of call after Salonika was Troy. It is, perhaps, no coincidence that there is no safe harbour between the Struma mouth and the Dardanelles.

S. CASSON.

Central America: Chronology.

Long.

The Burner Period of the Mayas. By Richard C. E. Long, B.A.

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In "Incidents of Travel in Yutacan" (London, 1843), by J. L. Stephens, Vol. I, there is a Maya calendar for a year 1 Kan by J. P. Perez. According to this, "the burner," whoever he may have been, takes his fire on 3 Chicchan, begins his fire on 10 Chicchan, gives it scope on 4 Chicchan and extinguishes it on 11 Chicchan, each of which dates is 20 days after the preceding one. He then takes his fire on 3 Oc, which is 5 days after 11 Chicchan, and goes through the same acts on the same day-numbers with Oc, then with Men, and then with Ahau, ending on 11 Ahau, after which he starts on 3 Chicchan again. Perez no doubt took his information from one of the books of Chilan Balam, but the whole would form a tonalamatl divided into four main divisions each 65 days in length and again divided into 4 subdivisions. A large part of the Dresden and Tro-Cortesianus Codices is taken up with just such tonalamatls, though the lengths of the main divisions and subdivisions vary. In all of them one set of glyphs and pictures is connected with the first subdivision of each main division, another set with the second subdivision of each, and so on. Similarly, the burner does the same act in the corresponding subdivision of each main division, and the hieroglyphic original of Perez's authority must have been in the same form as the tonalamatls in the Codices.

Perez gives several slightly varied expressions for the above activities, e.g., "the fire of the burner begins" or "the burner ignites the fire," and so with the others; but the Nyma equivalents, which he also gives, show a uniform form of words

* For other numismatic evidence see Seure, "Trésors de monnaies antiques en Bulgarie." (Paris, 1923), p. 26 ff.

for each respective act of the burner. As to the meaning of these, I have been able to gather some information from the vocabulary in "The Maya Chronicles," by D. G. Brinton (Philadelphia, U.S.A., 1882) and from "A Maya Grammar," by A. M. Tozzer (Vol. IX of *Papers of the Peabody Museum*, Cambridge, Mass., U.S.A., 1921). It would appear that the translation of three of them is as follows:—

U cha kak ahtoc - "The burner takes the fire" (*lit.*, he takes the fire the burner).
 U hoppol u kak ahtoc "The fire of the burner begins" (*lit.*, it begins his fire the burner).
 U yalcab u kak ahtoc "The fire of the burner runs" (*lit.*, it runs his fire the burner)
 Perez's translation "the burner gives the fire scope" is therefore sufficiently accurate and better than his alternative one, "permits it to destroy."

As to the fourth sentence, I have no information except Perez's translation:—

U tup kak ahtoc - "The burner extinguishes the fire."

Mr. Ralph L. Roys ("A Maya Account of the Creation," in *American Anthropologist*, 1920), translates a portion of the Chilán Balam of Chumayel in which are mentioned the Four Burners, 4 Chicchan, 4 Oc, 4 Men and 4 Ahau. "These are the 4 Ahaus (or kings)." In his notes he says there is in the Chilán Balam of Tizimin an account of the Four Burners and he considers they are closely associated with the period called the uinal.

It is to be noted that the day-number 4 given in the Chumayel is the number of the day on which the burner gives the fire scope according to Perez, so this account agrees with the latter as far as it goes.

Now it is well known that the tonalamatl was divided into four parts, each allotted to one of the cardinal points as shown graphically in Tro-Cortesianus, Plates 75-6 ("The Tableau des Bacab"). An examination of this plate will show that all the days of the burners' acts falling on Ahau are on the upper part of the plate, corresponding to the east; those on Chicchan on the left hand side (north); those on Oc on the lower part (west) and those on Men on the right-hand side (south). A further connection with the burner period may be the fact that of the 20 "weeks," of 13 days each, into which the figure of the plate is divided, those "weeks" which contain no day of the burners' activity in them, namely those commencing with 1 Kan, 1 Muluc, 1 Ix and 1 Cauac, are shown in a different position from the rest, because the lines of dots representing the days in their case are parallel to the margins of the plate, while the lines of dots for all the other "weeks" radiate from the central square towards the outer part of the figure. It seems fairly certain, then, that the Four Burners are identical with the Four Bacabs who presided over the cardinal points, who, again, are probably the same as the Four Chacs who sent the rain. The Bacabs are said by the present Yucatec Maya to be great smokers, and the flashes of lightning are believed to be sparks from their cigars. This agrees well with the name "burner." The division of the four parts of the tonalamatl between the Four Bacabs is parallel to the allocation of the 4 years of 365 days to each of them. In each case each Bacab presides over a certain number of uinals and 5 days besides, the 5 days from the day-number 11 to the day number 3 being parallel to the 5 Uayeb days.

Turning now to Landa's account of the monthly festivals as translated by Cyrus Thomas ("A Study of the Manuscript Troano," Washington, 1882), there is a description of a fire ceremony called Tupkak held during Mac in which the hearts of animals were cast into the fire. The name is clearly the same as the "u tup kak," "he extinguishes the fire," of Perez's burner. Landa mentions that fire was kindled for the ceremony, but this was a feature of several other ceremonies also, and no doubt the more important part of the ritual was the extinction of the fire by the assistants called Chacs with their pitchers of water. He further states that the same fire ceremony was performed in Pax.

Now his specimen calendar for a full Maya year is for a year 12 Kan, and in such a year the burner would extinguish his fire in each of these months, namely, on 11 Oc, 7 Mac and 11 Men 12 Pax, so we have an exact agreement both in name and in calendrical date, proving that the Tuppkak of Landa was not, as his account at first would seem to mean, a fixed festival depending on the month, but, on the contrary, that it was a moveable festival depending on the tonalamatl and determined by the burner period of Perez. This shows that the burner period was a rule for holding 16 moveable feasts divided into 4 groups of 4 each, *i.e.*, 4 different ceremonies repeated for each of the Four Bacabs, just as the Zapotec divided the tonalamatl into 4 equal parts allocated to 4 different gods, each of whom was worshipped during his own period of 65 days (Seler, in *Bulletin 28 of Bureau of American Ethnology*, p. 267). Possibly the ceremonies called the taking, beginning, and giving scope to the fire were less important or less spectacular, and therefore not recorded by Landa.

Two difficulties remain to be noticed. The first is that Landa describes the Tuppkak as fixed in the months of Mac and Pax. But reference to his account will show that in Mac he describes several other ceremonies, which may be taken to be the fixed feasts of Mac, and similarly in Pax he also describes other ceremonies different from those of Mac and presumably being the fixed rites of Pax. The only thing common to the two months is the Tuppkak. The second difficulty is that the burner would extinguish his fire on three other dates in the year 12 Kan, namely, on 11 Men 12 Zip, on 11 Ahau 1 Xul, and on 11 Chicchan 2 Yax, and it might be expected that the Tuppkak would be mentioned in these months also, but this we do not find. Landa's language is often so brief and vague that it is not very easy to prove a negative from it and in any case he was only concerned to give an outline of the ceremonies, not a detailed description. There is also the possibility that the burner period merely showed lucky days on which such a ceremony might be held, and not days on which it must be held. This surely was the case with the majority of the tonalamatls in the Codices. In the Tro-Cortesianus there are over 200 tonalamatls, and even the Maya priests, numerous as they were, could hardly have found time to celebrate ceremonies on all the days marking the subdivisions of these. S. Landa says they took care to perform the rite of baptism on a lucky day and one of the tonalamatls in that Codex deals with baptism. But this would not exclude the possibility that some tonalamatls might give the dates of ceremonies to be performed every time the proper day came round, as we might infer is the case with the burner period from the prominence given to it. It is remarkable that Boturini (quoted by Perez, *op. cit.*) speaks of 16 moveable feasts amongst the Toltec or Aztec. Some of his other statements seem to apply better to the Maya than to the Nahuatl and this may contain a reference to the 16 moveable feasts of the burner period.

It would seem that both the Maya and the Aztec arranged their fixed festivals on a basis of 16 also. This clearly appears in the names of the Aztec months, which are primarily 16 in number, but converted into 18 by separating Tozoztontli, "the little watching," from Uei Tozoztli, "the great watching," and Tecuiluitontli, "the little festival of the lords," from Uei Tecuiluitl, "the great festival of the lords." The Maya differed in having 18 separate month names, but Landa's account shows that the last definite monthly festival was in Pax, the 16th month, and that there was no other special rite from that till the end of the year. If then the ritual season of the year ended with Pax, leaving a blank period until the following new year, it may explain why the sign for this month contains the tun glyph. The tun, "stone," used for counting time periods doubtless had a meaning of "year" in a vague sense and the Pax sign made up of the tun glyph and a special superfix may have had a meaning like "end of the ritual year." So the sign for Uayeb also contains the tun glyph, but with a different superfix, and as the Uayeb days occurred just before

the new year, it would be appropriate that the glyph for "year" should enter into the composition of the sign.

RICHARD C. E. LONG.

Africa, West: Art.

Addison.

Steatite Figures from Moyamba District, Central Province, Sierra Leone, West Africa. *By W. Addison.* **109**

Steatite figures are locally known as Nomoris. They are more difficult to obtain now than was the case when I went out to Sierra Leone over 20 years ago. With respect to Nomoris generally, I think that very little can be added to what Mr. T. A. Joyce wrote in "MAN," 1905, 57 and 1909, 40. I have heard the opinion expressed that Sierra Leone is the only place in the world in which the Nomori is found. If this view is correct, it would appear that the steatite heads, the subject of this paper, are of peculiar interest. Their size and features make them unique, and the fact that they have been treasured by their possessors through, as far as is known, many generations without falling into the hands of a white man until they were presented to me, is eloquent of the value placed on them from their unknown sculptor down to the friendly Paramount Chief who gave them to me as a mark of his friendship and

esteem, an act I appreciated to the full and shall always appreciate. He told me that the heads have always been in Mendiland. He, himself, is a Mendi Paramount Chief; between 60 and 70 years of age, a wise and a good man, and a pagan. He stated that where such heads exist it would be quite wrong to sell them, they are held in such veneration. The "medicine man" of the village made use of these heads as a source of income. On the payment of a sum depending upon the wealth of the suppliant, the "medicine man" would appeal to the spirit in the heads to

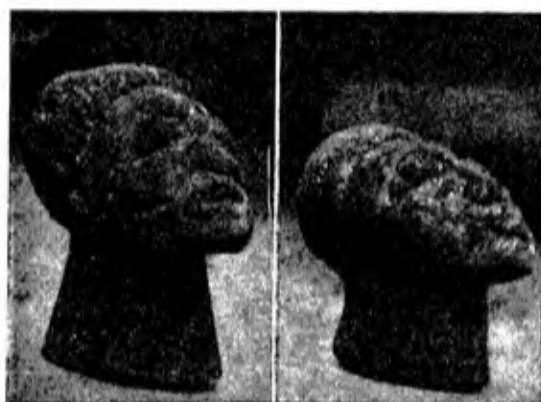


FIG. 1.—STEATITE HEADS FROM MOYAMBA DISTRICT, SIERRA LEONE.

create disaster, fortune, a handsome wife, a child, relief from sickness, a good harvest, revenge or any other favour the suppliant might desire. It will be observed that the ears are small and earrings are worn. A ring passing through the bottom of the partition between the nostrils is an additional ornament. The thin moustache hangs down each side of the lips. The lips are not as thick as the lips of the negro, nor are the nostrils so broad, flat and open. The fashion in which the hair is dressed is quite unlike anything I have ever seen. I have observed a few men in Sierra Leone with their hair plaited after the fashion prevailing among the women, but I have never noticed the "nodule" fashion. It is probable, of course, that the sculptor adopted the only method he could think of to produce a semblance of hair, and that the hair "nodules" have no bearing on the fashion of hairdressing at that date. The position of the head on the neck is distinctly curious; the face to the sky. In each image the head might have been carved to represent the head of a dead man. The Paramount Chief told me that their origin is unknown. Tribal wars, disease, migration, and famine rendered continuous and accurate mental record difficult if not impossible of achievement. There are no written records. A similar lack of knowledge is present in connection with all genuine Nomoris. None of my men had seen anything like the heads. The carriers who carried them for me were

most uneasy under their unusual load, and parted company with them with a sigh of grateful relief. I had them on view in my house for some time, when one of my servants broke it to me gently that all the servants would leave me if I did not "hide" the Mahen Yafe, as he described them. Mahen Yafe means the Chiefs' Devil, and anybody not a Chief in possession of a Mahen Yafe courts disaster. I certainly did not want to lose my servants, some of whom had been with me for years, so I "hid" the Mahen Yafe, resulting in the restoration of peace, order and tranquillity in the household. I fell ill shortly after and my servants held that my illness was a punishment. "Massa no 'gree for hide de Mahen Yafe, the devil done vex han' he make massa "sick good fashion." When I recovered, they told me that the devil was no longer angry with me as I had put the Mahen Yafe where the eye of man could not see them. None of the white men to whom I have shown the heads have ever seen anything like them. With the heads, the Paramount Chief gave me two bracelets. One appears to be made of iron and the other of a metal which might be brass. He told me that the bracelets are generally found with Nomoris, sometimes in a "cleft in the ground." On asking him to show me such a "cleft" he expressed his inability to do so, explaining that what he had told me is what had been passed on to him by the old people of his tribe. It would be interesting to know the origin of the bracelets and the metal of which they are made. The iron bracelet may have been manufactured from the iron ore of the country, but when and where was the other made? It was cast in a mould. It is possible that it was made in Europe. On the other hand, it is also possible that it was made by one of the pupils of the African negroes who were brought to Europe many years ago by the Portuguese and taught metal work for the benefit of their brother negroes. There are many excellent specimens of negro metal work of long years ago in the British Museum. The fact remains that the type of bracelet is not now used, nor is it sold for ornament or any other purpose.

The whole matter appears to me to be of sufficient interest to place before the Royal Anthropological Institute, trusting that someone skilled in such matters may be able to decide the race of men represented by the heads produced by the hands of an unknown negro sculptor, and where that race now lives, if it still survives.

W. ADDISON.

Assam: Religion.

Hutton

Sacrifice by Hurling from the Roof. By J. H. Hutton.

110

In a paper in a recent number of the *Journal* of the R.A.I. (Vol. LII, 1922, pp. 55-70) I described an Angami Naga ceremony in which the conclusion was accompanied by the erection of two posts of phallic design in front of the performer's porch, and the throwing down of a victim from the top of the roof of the house, the victim being, in this case, a puppy dog to which human attributes are given in the form of a spear and a piece of cloth, while local tradition states that the victims were formerly human beings, though many generations ago. I have since come upon two parallel cases which seem to be worth recording.

The independent Konyak tribes of the north-east Naga Hills are reported to offer a human sacrifice in which the victim is cut down so that his blood falls from above on to the ladder (a notched pole) by which the house of the sacrificer is entered, these Konyak houses being built on a platform and not, like all Angami houses, on the ground. The ceremony at which the sacrifice takes place is, like the *Lisü* genna of the Angamis above referred to, one performed by prosperous persons for the benefit of the community, at the time of celebrating the harvest home.

The second parallel, older and more striking, is to be found reported by Samuel Purchas, who, on the authority apparently of various ancient authors, describes

the temple of Hierapolis in Asia Minor as having a great porch "almost an hundred fadome high" facing north, and in front of the porch two enormous phallic emblems, "*priapi*," "about the height of three hundred fadome." The victims (animals) to be sacrificed were cast down from the top of the porch. Children also were let down by ropes in sacks. ("Purchas his Pilgrimage," Bk. 1, ch. 15). Even though the general accuracy of the whole passage must remain suspect, if only by reason of the extravagant heights given, still the parallel is sufficiently remarkable. One may suppose that the casting down of the victim from above aids the fall of fertilising rain. The mention of children by Purchas suggests that possibly the puppy in the Angami ceremony has taken the place of a child, particularly as if anyone of the crowd can manage to get hold of it and carry it off to his house safely, he is allowed to rear it, though more often it is destroyed in the struggle to obtain it. The second victim, a calf, likewise provided with a spear and a cloth, is invariably killed, its liver being torn out if possible before its death. Perhaps the treatment of the two victims taken together represent a gradual mitigation of the original form of the human sacrifice, the substitution of a calf for a man having been first accompanied by the throwing down of a child, which might be saved.

J. H. HUTTON.

Religion.

Róheim.

Passover and Initiation: A Postscript to the Passage of the Red Sea. Man, 1923. 96. By G. Róheim.

111

The word "passach" is explained by Jahveh passing over, i.e., not visiting the houses of the Hebrews and refraining from killing their first-born.* Now, there is a general tendency in savage initiation ceremonies for the elders to assume a protective attitude towards the novices who are threatened by a death-bringing demon; in this case Jahveh.† On the other hand, every initiation ceremony contains an element of "passing over" from youth to manhood as a "*rite de passage*."‡ Perhaps even the "Exodus" is originally not the coming out from Egypt, but the emergence from youth to manhood. The Basuto call their initiation ritual "pollo," a word derived from "volla," i.e., "coming out."§ Now, this tribe seems to have adopted the rite from the Balemba, a tribe showing distinct traces of Semitic influence.|| Their initiation rite includes both circumcision and ritual immersion in water, the same being the case among Kikuyu¶ and, if we are not mistaken, among the ancient Hebrews.** The Basuto "pollo" is connected with a festival of first-fruits,†† just as the Passover with the Massôt.

G. RÓHEIM.

* Exodus xii. 13, 23, 27. Professor Heller (Budapest) tells me that the verb *âbar-âl* means "to pass by," and also "to forgive, to forbear."

† The connecting links with the ritual of initiation have been clearly indicated by Frazer, "The Dying God," *Golden Bough*, Part III., 1911, 178:—"We may surmise that the slaughter was originally done by masked men, like the Mumbo Tyumbos and similar figures of West Africa, who went from house to house and were believed by the uninitiated to be the deity."

‡ M. A. van Gennep, "Les Rites de Passage." 1909.

§ Endemann, "Mitteilungen über die Sotho-Neger." *Zeitschrift für Ethnologie*, 1874 37-39. Youngsters who do not submit to be initiated are killed.

|| H. A. Junod, "The Balemba." *Folk-Lore*. XIX., 284. They eat no meat if the animal has not been killed by cutting its throat, 282.

¶ Junod, *l.c.* The expression "to throw oneself into the river" is an equivalent of "being circumcised." P. P. Cayzac, in *Anthropos*. 1910, 317.

** Ceremonial bathing and circumcision are the conditions for the Gentile who joins the community.

†† Endemann, *l.c.*

Anthropology, Physical.

Thomas.

The Sex-Ratio and Race. By Northcote W. Thomas, M.A.

112

If the author of the note on this question (MAN, 1923, 97) had searched a little further, he would hardly have committed himself to the statement that there is little variation in the sex ratio within a colour group. His data are wholly insufficient to establish any such generalisation. Apart from negroes, he has only one case (U.S.A.) in which figures are given (I assume that "coloured matings" refers not to negroes but to Red Indians), and one case (Andamans) in which there is a general statement as to the sex ratio.

The statistics for negroes are more abundant; but three out of four cases do not refer to the negro at home in Africa and cannot be taken to prove anything as to African facts. As to Felkin's data, a good deal turns on the total number of cases on which his statement is based. I have collected a certain amount of information among the Edo (*Edo Report*, I, 13-16), and in Sierra Leone (*Report* I, 14-24) and more extensive data on the Ibo of Awka and the neighbourhood (*Ibo Report*, I, 10-25). The latter, on a total of nearly 5,000, show 51 per cent. of male and 49 per cent. of female births. But an analysis of the figures discloses striking variations in the sex ratio, which varies with the number of wives, men with one wife having a small excess of female children, while those with five, six and seven wives have three males to two females on a total of over 300. It is noteworthy that in Sierra Leone the same proportion is found irrespective of the number of wives. It is, therefore, very far from the truth to say that there is little variation within the group of the black race.

My Ibo data were not collected in a form that allowed me to determine the sex ratio of the first born; but in my genealogies on a total of 120 cases the sex ratio was 76 males to 44 females and there is no reason to suppose that these figures are exceptional.

In Sierra Leone the ratio for the first wives was 120 to 48. This is rather different from the data on which Parkes relies.

Allowing for differences in physique and taking into account the fact that the normal interval between each birth among the Ibo is fixed by custom at a minimum of three years (I am not sure whether this applies if a child dies in infancy), I very much doubt if it is true that prenatal conditions are much worse among coloured races. It is no uncommon thing among the Edo for a woman to give birth to a child on her way to or from market; and, though I made no special enquiries, I have no reason to suppose that any excessive mortality resulted. In one case a child was born in the market place about 3.0 p.m. and in recognition of my interest in the case the mother came with her friends, arriving about 7.0 a.m. the next day, and danced for me for about two hours. Prenatal conditions must after all be considered in relation to physical aptitudes; it is hardly possible to compare black with white in respect of prenatal conditions. I never made any attempt at ascertaining the amount of prenatal mortality and I doubt if reliable results could be obtained; but no facts came to light which suggested the miscarriages were frequent. They may be in individual cases, but the occurrence of large families, ten or more children to a wife, seems to imply that the prenatal mortality is sometimes very small.

In addition to my data there are some from Kamerun, I think in the *Büssler-Archiv*, which Dr. Parkes has overlooked; and one on the sex ratio in Europe, inclusive, if I remember rightly, of prenatal casualties, so far as data were available, in a German biological publication, possibly *Zts. für Rassenbiologie*, which is worthy of attention.

I observe that Greece does not figure in Table I; I seem to recall a birth ratio of about 144.

N. W. THOMAS.

Ireland: Trephining.

Walmsley.

A Trephined Irish Skull. *By Thomas Walmsley.***113**

Cennfaelad, a young Irish chief, had his skull fractured by a sword-cut at the battle of Moyrath, A.D. 637. He was under treatment for a year afterwards at the celebrated school of Tomregan (now in Co. Cavan), where the injured part of his skull and a portion of his brain were removed. He recovered and became afterwards a great scholar and a great jurist. Such is one record of early Irish surgery.



FIG. 1.—TREPHINED SKULL FROM NENDRUM MONASTERY, STRANGFORD LOUGH.

The skull reproduced here (Fig. 1) is that of a young male of about twenty-two years of age, which was obtained, with a number of other skulls, from early Christian (ninth century) graves at Nendrum Monastery in Island Mahee, Strangford Lough. The other skulls, with a few more of the same period from another locality, I hope to describe at a later date, but this one is of sufficient interest to be described separately. For on the left

side, towards the antero-inferior angle of the parietal bone and just within the temporal line, there is a trephined opening. The diameter of the opening is 8 mm., but originally it must have been more, for the edges have healed all round; this can be seen better on the inner surface. Round the opening, on the outside of the skull, for a distance of 3 mm., the bone is bevelled as if it had been scraped away. On the inside there is no such bevelling; rather the bone is slightly raised and tuberculated round the original margin of the opening.

There are no marks of injury on the skull, and there is no evidence of disease. The deficiency above the mastoid is due to the falling out of a sutural element.

THOMAS WALMSLEY.

Religion.

Hocart.

Catching the Sun. *By A. M. Hocart, M.A.***114**

The progress of comparative history has been hampered too long by the abuse of such phrases as "sympathetic magic," "animism," "primitive thought," which may be convenient labels for classifying customs, but which no more reveal the origin of human ideas than the term "quadruped" explains the structure and development of the various kinds of four-footed animals. Unfortunately these phrases have too often been accepted as final explanations and have too successfully laid to rest the spirit of inquiry. There is no way, however, to origins except by analysis and comparison: as we dissect animals to understand the history of their kind, so we must dissect customs and beliefs and then we shall often find a definite structure which answers all our questions.

Sir James Frazer in the second edition of his "Golden Bough" (Vol. I, p. 117) quotes the following practice as a case of sympathetic magic—in other words, of some hazy notion as to the relations of a thing to its parts or to its likes: "On a small hill in Fiji grows a patch of reeds, and travellers who feared to be belated used to tie the tops of a handful of reeds together to prevent the sun from going down." I have in "Anthropos" (1911, p. 727) published my account of those same reeds. I will only mention here that before tying the reeds the traveller signs to the sun, an action called *yalo* from *yalo*, soul, image, double. The action and the word

contain the whole theory of this charm : the traveller draws to himself the double of the sun and ties it up inside a knot.

If we have any doubts about the matter they will be dispelled by another example of *yalovaki* from the same island of Lakemba. If the two priests of the Lemaki family were asked to detect a thief they waived (*yalovakina*) two large pieces of bark cloth in the middle of the village. The two old men then retired into the temple, leaving the bark cloth outside. They slept, and as they slept they saw the soul of the thief standing at the door. The account given by Williams in his "Fiji and the Fijians" (Vol. I, p. 250) is even more explicit than mine, for it says : "The Chief called for a scarf, with which to catch away the soul of the rogue."

This charm, therefore, when we know all the details, ceases to appear as the outcome of any hazy notion, but as the logical application of a very definite theory of doubles. Exactly how this theory was arrived at and how it was worked out is still a matter for research, but we can imagine ourselves developing such a theory if we wipe out completely all we have been taught about light-rays ; for seeing our reflection in the water we could interpret it as a second self which does and suffers exactly everything that we do and suffer so that whatever we succeed in doing to the one will also be done to the other.

Whatever the origin of the theory of doubles, its existence is a fact which closer study, as in the present case, may detect in many places where it was overlooked before. It may explain a good many myths. For instance, our Lakemban reeds give a clue to an episode in the story of Maui, the Great Polynesian hero : he nooses the sun and beats it,* which is no more than our very matter-of-fact Fijian does at the present day ; for if you can tie the sun's double up in a knot there is nothing to prevent you from giving it a good beating. A. M. HOCART.

REVIEWS.

Psychology : Racial.

Brigham.

A Study of American Intelligence. By Carl C. Brigham, Ph.D. Princeton University Press. 16s. net.

115

Since mental development more than any other feature may be presumed to have led to the pre-eminence of mankind in the animal kingdom, it may also have played a part in differentiating the subdivisions of the human race. Little enough is known of mental features from this standpoint, and of that little but a fraction rests on quantitative observations, so that the present work will receive a welcome, as opening up a new field. It comprises a statistical study of the scores made by the soldiers of different origins in the series of psychological tests applied to the recruits in the American Army during the War. The value of the scores was tested by a comparison with the records of army training, when it was found the highest returns were from engineer officers, officers generally, and O.T.C. students ; and the lowest from men of little military value or those who proved "quite unteachable." Comparing the various countries of origin the order of merit on the average scores was England, Scotland, Holland, Germany, United States (white draft), Denmark, Canada, Sweden, Norway, Belgium, Ireland, Austria, Turkey, Greece, Russia, Italy, Poland, United States (coloured draft). It also appeared that the drafts of the foreign-born showed an improvement which varied directly with the length of residence in the United States.

The conclusion is drawn that the more intelligent elements in the States are derived from North-Western Europe, and that, as this element has decreased in recent years, it may explain the falling off in the scores of the more recent immigrants. The author prophesies a deterioration in American intelligence which will proceed

* Tregear : "Comparative Maori Dictionary," s.v. Maui.

with increasing rapidity unless the emigration from South and Eastern Europe is restricted and better class from the North-West encouraged.

Before the Western European prides himself on this tribute to the countries of origin of the old colonial and earlier emigrant stock, it is necessary to scrutinise some of the data. The study is one of mass statistics, not of individual psychological inquiry; three sets of tests were used, the alpha and beta given *en masse* and the Stanford and performance tests given to those who failed or were deemed unfit for the former. The figures were inserted into a combined scale by the use of a regression equation. Such a procedure may indicate truthfully broad differences of groups, but is unreliable for individual cases. The alpha tests are largely verbal, and in some tests depend on knowledge of peculiarly American features; it might well be that the higher scores of those members of the foreign born draft who had been 10 and more years in the States was in part due to education in American schools rather than to innate differences in intelligence. In a less measure, perhaps, but still with little doubt, education played a part in the scores in the beta and the Stanford tests. It is true that this feature is discussed by the author, who shows that it was not always the highest grades of scholars who made the best scores; but the value of an American education to meet a "typically American situation" is not dealt with. It would be invaluable if the data could be analysed test for test on a racial basis. The author criticises quite soundly the popular misuse of the term mental age which, he says, is bad scientific slang for a total score, and is not the same thing as a diagnosis of mentality. In referring to feebleness of mind, he points out the real diagnosis is social and the score is only one of several factors to consider. Similar caution is needed in comparing groups of individuals by this method. At the same time this series affords by far the best comparative statistics that exist, and the results fit in well with English experience based on smaller figures and populations selected for inefficiency, though the position of Italy causes some surprise.

The section on racial as opposed to national characteristics seems to involve too many assumptions to be quite scientifically reliable. The physical traits of the subjects were not noted. The method has been to assume, firstly, that each country of origin contained the so-called races of Europe, Nordic, Alpine and Mediterranean in certain proportions; secondly, that the draft examined contained these in the same proportions as the whole country of origin; and thirdly, that the acquired experience, educational and otherwise, must have been equal in all cases. All these might be disputed. In the case of the negro, it has been largely possible to estimate educational effects and to show that the northern negro exceeds the southern negro of equal schooling. The author, however, regards as misleading a theory that disregards differences found between racial groups unless the groups have had the same environmental and educational opportunities, though he agrees it is well to eliminate tests that demonstrably measure nurture more than nature. He concludes that the Nordic is superior to Alpine or Mediterranean, and both of these to the negro, and that if the four types blend the future American will be inferior to the present native born, from which he argues the advantages of race purity and that the present immigration laws encourage intellectual inferiority.

The thesis is argued in a restrained manner, based on figures which, if open to some disadvantages, are very superior to any others; it must be read by all who study the present trend of human progress.

F. C. S.

Archæology.

Crawford.

The Andover District: an Account of Sheet 283 of the one-inch Ordnance Map (Small Sheet Series). By O. G. S. Crawford, B.A., formerly Junior Demonstrator at the School of Geography, University of Oxford. Oxford

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Geographical Studies. Oxford University Press. Pp. 99, with 15 illustrations, 15 maps, and one large folding map. Price 7s. 6d. net.

It is often inconvenient for a writer to be confronted with an early work of his; how much more so to have an early manuscript given to the public after an interval of twelve years. Mr. Crawford need not, however, be ashamed of this production of his undergraduate days. He has had the opportunity of revising the text in the light of his riper experience, but it has been impossible to embody in it all the fruits of his later researches into the past history of the region.

The work is divided into two parts: the text and the appendices; and the former again into two: the physical and economic aspects of the region. It is the second of these which will be of most interest to our readers, though it should be read in the light of the first. Mr. Crawford has given a very full picture of the archæology of the district, from palæolithic to Roman times; an exceptionally full account of the later Saxon settlements; some interesting remarks on the forests of the Middle Ages, and a brief survey of the modern conditions. He is at great pains, however, to impress upon his readers that he has but touched upon the fringes of the subject, and that much more is to be ascertained from further research.

He has some interesting remarks upon the lynchets on the downs, and suggests that until the close of Roman times the uplands only were cultivated, while valley settlement was a new feature of Saxon days. He does not give his reasons for this view in full, but, I understand, proposes to do so shortly. He will, however, have to take into account the evidence of early lowland settlement in the Cambridge region, adduced recently by Dr. Cyril Fox, and the early lowland sites at Brentford, Glastonbury, and elsewhere.

H. J. E. P.

Morocco: Ethnography.

Mercier.

La Civilisation Urbaine au Mzab. By Marcel Mercier. Paris, 1922. pp. 266, avec 12 planches.

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As a result of three journeys to the oases of the Beni Mzab, undertaken between the years 1915 and 1921, Monsieur Marcel Mercier has produced a book of remarkable interest for all students of North African culture. After outlining the origin and the migration to Africa of the Kharejite schismatics during the fourth califate, he describes the fortunes of those Berbers who espoused their cause and who, as a result of continuous persecutions, finally established themselves in the oases of the northern Sahara known as the Mzab. The Mozabites, owing to the inability of their barren land to support an increasing population, have long since been in the habit of establishing themselves (often for years at a stretch) as traders in the chief native townships of the Algerian plateau and desert. In this capacity they have rendered themselves indispensable to the economic life of their neighbours; among whom, however, they are unpopular.

Monsieur Mercier's observations of this interesting people have been carried out in their own small city-states of the desert. He shows how the religious origin of the community has left its mark in the town-planning of the Mzab and on the very architecture of its buildings. In the latter he finds possible traces of ancient cults, of which the cone-shaped ornaments upon certain buildings afford an example; while in a cruciform ornament to be found upon doorways (a form of design common in the facial tattoo marks of the Berbers of the Aures *massif*) he detects a survival of the sign of the ancient goddess Tanit. He describes in careful detail the social divisions of the Beni Mzab, their clans and "soffs," and also deals with the technology of some of their arts and crafts. It would appear that the Romans never penetrated to the Mzab. Traces of arts introduced by them, therefore, are not to be found, as among the Shawiya of the Aures. It is curious

that what little pottery is made in the Mزاب differs from the very early types still produced by other Berber peoples of Algeria in that it is turned upon a wheel. The wheel is also used in the island of Djerba, at one time a centre of the Kharejite sect. Carpet-making is an important industry among the Beni Mزاب, the work being carried out entirely by the women of the household, without the assistance of a male member of the family to superintend the working-in of the designs, as is usual in other parts of Barbary. Monsieur Mercier gives a detailed account of the weaving of these carpets and of their designs, the principal *motifs* of which he illustrates.

The book is illustrated by photographs, plans, and line-drawings; is provided with an index, and contains a most useful bibliography. Monsieur Mercier's work will be found of great interest to all those engaged in the study of North African ethnography.

M. W. H.-S.

CORRESPONDENCE.

Archæology.

Tristram.

To the Editor of MAN.

Palæolithic Cave Paintings.

118

SIR,—I should like to put forward some arguments against the current opinion regarding the *raison d'être* of the Palæolithic cave-art. The idea seems to be that the animals depicted were drawn for the purpose of magic, which was to enable the animals which the people hunted to be more easily caught. Now some of these paintings are in the most inaccessible positions at the end of very long caves. Imagine a primitive man, with bad lighting equipment, blindly stumbling along, for hours, into the far interior of one of these caves, in a state of extreme nervous excitement and fear (for the black depths must have been full of terrors to these primitive men), all in order to perform magic to capture the animals *outside*! Surely it is impossible.

The idea of all mimetic magic is to imitate all the conditions as closely as possible. They would surely never spend hours in such terrifying circumstances in order to catch the animals wandering about in the open! They would perform the magic in the open, imitating the actual conditions as nearly as they could—cf. the Bushmen dances, etc.

Other explanations of the paintings can easily be found. Could not they represent a happy hunting-ground, the home of the dead? The paintings being in very weird conditions would provide exactly the mysterious atmosphere required for such a belief. What if the abode of the dead was supposed to be underground, as is so common; or even in the living rock? The dark and murky depths of the caverns would be just the places where the dead would be supposed to dwell. The paintings would certainly be used for the celebration of primitive rites and mysteries.

The objection has been made to me that savage beasts are depicted as well as beasts for hunting. But when primitive people believe in a material home of the dead, it is surely nearly always a complete counterpart of the world of the living, with its good and its bad points. Or, perhaps, the dead might be thought to turn into savage beasts in their new home? Not all the dead, probably, but certain people such as magicians. This is so often the case in Africa. Any of these explanations is surely preferable to the prevailing one. Also any argument in support of this objection could be used equally well against the prevailing theory.

Another suggested objection is that there are drawings of arrows sticking into the animals, etc. But surely the dead would hunt in their new home?

Yours faithfully,

Trinity College, Cambridge.

LEONARD TRISTRAM.

Oct. 7, 1923.



FIG. 1.



FIG. 2.



FIG. 3.



FIG. 4.



FIG. 1

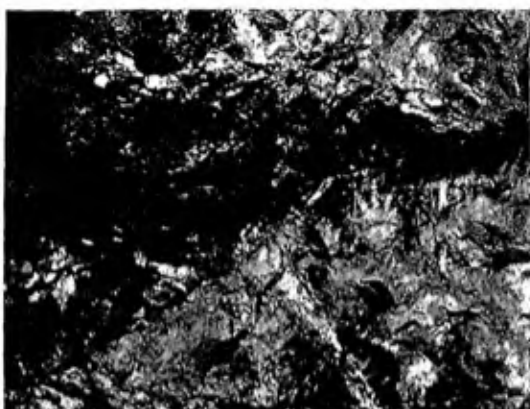


FIG. 2.

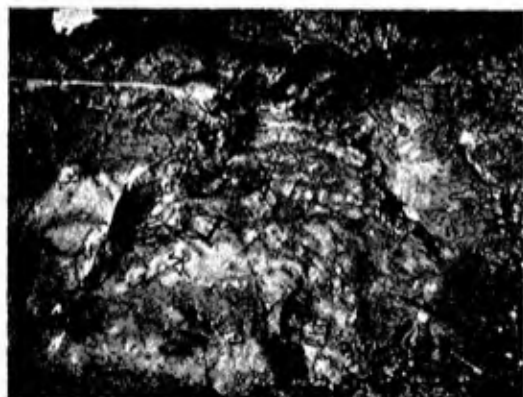


FIG. 3

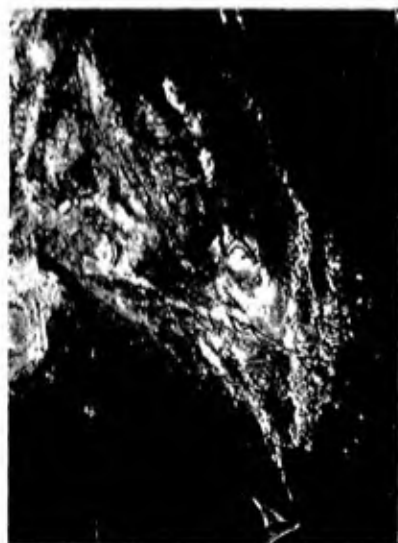


FIG. 4.

ORIGINAL ARTICLES.

With Plates N-O.

Papua: Art.

Strong.

Rock Paintings from the Central District, Papua (British New Guinea). By W. Mersh Strong, M.D.

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The rock paintings, the subject of this communication, were discovered near Bomana in the neighbourhood of Port Moresby, Central District of Papua (British New Guinea).

The main road was left about 11½ miles from Port Moresby on the Sapphire creek and Sogeri road just before the Eriama scrub begins. We followed a track leaving the right hand side of the road and skirted the Eriama scrub and creek for about a mile, travelling in an easterly direction. Under the guidance of my shooting boy, Waiboa, we turned off in a southerly direction and, after travelling for about a mile over a lightly timbered grassy plain, we reached a steep range of low hills. The paintings were found on a prominent whitish rock (Fig. 1) in a short valley running up into the hills on our right hand side (i.e. the true left side of the valley). The rock was clearly not *in situ*, but appeared to have fallen from the hill above. It was estimated to be about 25 feet high and about 18 feet broad. The surface facing across the valley, on which the paintings were, was protected by an overhanging projection of the rock. The rock itself appeared to consist mainly of limestone of a whitish colour. The rocks in the immediate neighbourhood also consisted of limestone, but of a black colour, probably caused by bush fires. A fragment of volcanic rock seems to have been included in the large limestone block on which the paintings were. The whole district is very much contorted, faulty and metamorphosed, but the limestone was surprisingly little altered. The low range of hills has every appearance of a fault face and the rock on which the paintings were found appeared to be a fragment broken off the fault face.



FIG. 1.—LIMESTONE BLOCK WITH PAINTINGS.

The paintings (Plates N-O) were photographed by Mr. C. R. Pinney, draughtsman, Lands Department, whilst I made rough tracings of those in reach. The paintings were in a single monochrome red, apparently some preparation of the red oxide of iron found in the district. The figures were all done exceedingly roughly. Of those on the lower part of the rock there was a cassowary, figures of a man and of various designs, including a scroll pattern, and a figure which might represent a tortoise. Just above was a representation of what appeared to be a star (Pl. N, Figs. 1-4). Higher up, well out of reach, and extending some 20 feet up the rock surface, were numerous paintings of a design which can be described as a double chevron with pendant lines. There was also the figure of a man's face, and a crescent, and the figure of a man's hand.

The question of the age of the paintings and their origin is an important one. The present day natives have no knowledge as to who did them. The natives—or at least the native who guided me to them—have no superstitious fear or reverence for the paintings. There is a place near, where human bones have been deposited under the rocks; but these are clearly quite recent. The paintings, especially those on the upper parts of the rock, where they would be best protected from the weather, are exceedingly well preserved. In places water has dribbled at times over the face of the rock and has left a slight deposit over the rock and over the paintings. This deposit is, I suppose, a film of calcium carbonate, derived from the limestone, and I think we may take it that such indicates a certain antiquity. On a rock not far away were clear signs of calcium carbonate having been deposited by water on the face of the rock on a larger scale.

The face design faintly suggest the face *motif* of the Papuan Gulf; but the Gulf culture, or at least the face *motif*, clearly has its centre two or three hundred miles to the west of Port Moresby and traces of it hardly come within a hundred miles of Port Moresby.

These are the only rock paintings I have myself seen in New Guinea; but I have heard that occasional paintings of the same character are to be found over a wide area running inland from Port Moresby for forty or fifty miles. The only other rock paintings I have heard of in New Guinea (the territory of Papua) are those in black and white figured by Jenness and Ballantyne*; these paintings were very rough representations in red monochrome of canoes and perhaps men, seen by Dr. Seligman in the Marshall-Bennet Islands.

W. MERSH STRONG.

Psychology: Dreams.

Seligman.

Note on Dreams.† By Prof. C. G. Seligman, M.D., F.R.S.

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Recent advances in Psychology indicate the value of records of dreams as they occur among non-European and especially the more primitive races; indeed it seems certain that investigations into the dreams of natives will throw much light on both ethnological and psychological problems.

Experience among white civilised races has shown that a number of factors contribute to the form which a dream takes and certain principles underlying the series of changes which memories undergo before appearing in the dream have been formulated.

Dreams in themselves are the expression of an emotion (or clash of emotions = conflict) and frequently constitute wish-fulfilments, i.e., the fulfilment of desires which are often entirely unconscious and which sometimes have never been conscious.

For convenience of collection dreams may be divided into three categories—first suggested, I believe, by Dr. Ernest Jones:—

(1) Those that are both sensible and intelligible, telling a connected story of the everyday world, the meaning of which is obvious. Such are (in the white races) many dreams of children and such adult dreams as that in which the subject, short of cash for cigarettes, dreams that he has received a letter full of £5 notes. In these dreams the mental processes resemble those of waking life. Such dreams are often obvious and simple wish fulfilments.

(2) Dreams which tell or enact a connected story and have an evident meaning, but their contents, in whole or in part, strike us as unnatural, and we cannot fit them into the fabric of our waking life, as when a man dreams that his brother is mauled by a lion or gored by a bull.

* "The Northern d'Entrecasteaux." Clarendon Press, Oxford, 1920.

† Reprinted with modifications, suggested by experience from *Sudan Notes and Records*, Vol. IV, Pt. 3, 1921, by permission of the editor, Mr. J. W. Crowfoot, C.B.E., whom I take this opportunity of thanking for much kindly assistance.

(3) Dreams of which the content is bizarre, confused and nonsensical; such dreams often have a peculiar quality of unreality and can scarcely, if at all, be related to waking thought—*e.g.*, the dream-lion in (2) above may have a human head or the bull have human eyes.* Much of the strangeness of these dreams is due to the symbolism used to express the dream thoughts. Joseph's and Pharaoh's dreams (Genesis xl and xli) are good, but not extreme, examples of this form of dream and might be used as illustrations in an attempt to get information concerning dreams from natives; but the symbolism in Joseph's dream, in which his brothers' sheaves bow down before his sheaf (Genesis xxxvii), is simpler and probably would form a better starting-point. The modern ideas on the nature and significance of the processes which give rise to dreams belonging to classes (2) and (3) cannot now be discussed, it is only necessary to say that the unnatural and bizarre elements are considered to represent a symbolic rendering of a desire or emotion which we cannot bring ourselves to admit during our waking hours or which is so contrary to the normal trend of our modes of thought that it is never allowed full development in our consciousness.

It should be recognised that abstract ideas and mental states can only be rendered in dreams by concrete images—*e.g.*, the good and bad years of Pharaoh's dreams by fat and lean cattle, acutely felt self-dissatisfaction and distrust (in a case recently under observation) by the dreamer exhibiting his incompetence to a large audience. Moreover what is termed "condensation" often occurs in dream symbolism. In these cases there is a fusion of two or more concepts as, *e.g.*, when one friend wears the clothes of another or behaves like another, or where a fresh individual may arise having certain physical characters belonging to each of two persons. In waking life there are a whole series of such "condensations," where a number of objects—often themselves "symbols"—come together or often giving rise to objects of great emotional appeal, *e.g.*, the badges of various brotherhoods and even the National Flag.

It would be extremely interesting to know whether the dreams of natives belong in the main to class (1) or to the other two classes, and, if to the latter, whether they can in a general way be regarded as disguised wishes or fears. The information on dreams which I have been able to examine indicates:—†

- (a) that "natives" not infrequently have dreams of class (1);
- (b) that symbolism, sometimes very obvious, sometimes obscure both to dreamer and recorder, also occurs;
- (c) that conflict may produce dreams with a symbolism analogous to that which similar conflict might be expected to produce among ourselves.

It is very desirable to have records of a number of dreams in as much detail as possible and it should be relatively easy to investigate one type of dream. The members of almost every tribe at one time or another sacrifice to their ancestors, and in a number of instances it is recorded that the ancestor appeared in a dream and demanded a sacrifice (it being believed that ill-health or misfortune will ensue if the sacrifice be not made). Nor should it be difficult to discover the scene of this dream and the character of the surroundings, whether in the hut or in the open, the people, animals or things who were dreamt of as present, the form in which the ancestor appeared (human or animal or, *e.g.*, as a flame), whether in age or youth, in health or as

* The processes by which many "symbolic" representations arise are, no doubt, allied to those causing dreams. In Egyptian sculpture one of the common representations of the Pharaoh is a human headed lion, which, as in a vase in the Ashmolean Museum, is represented mauling a negro. Or the symbolism may be less elaborate as when the Pharaoh is represented as a bull, the "strong bull" of the hieroglyphs. The writer of this note has himself had a dream in which a friend, a successful breeder of pedigree cattle, appeared as a bull with human eyes.

† The contributions sent in answer to my appeal in *Sudan Notes and Records* constituting an important part of my material.

in last illness, what were the actual words spoken and so on. The possibility that the ancestor might be represented in the dream by the appropriate totem animal or as part animal, part man, should be remembered.

In dreams in which symbolism occurs it is important to ascertain whether the symbols are peculiar to the dreamer or generally recognised by the tribe or group as having a constant meaning. If the latter, then a particular dream or symbol becomes an omen and so influences the life of larger (or smaller) groups.

At the present time it is of importance to determine whether certain dreams (or symbols) which occur so commonly in the white races that they may be regarded as "types" also occur in non-European races. If they do, it becomes important to discover whether they have the same meanings among non-Europeans as they commonly have among Europeans (as discovered by analysis) or in European folklore. I would suggest that the study of this side of the question might be begun by inquiry as to whether the following dreams occur and their significance for the individual as well as their meaning for the group:—(1) Flying; (2) Fire; (3) Climbing a tree or going up hill; (4) Loss of a tooth or teeth; (5) The *Œdipus* dream, which might be extended to include connection with any relative within the forbidden degrees of the people concerned.

Regarding the loss of tooth dream, I already have records of its occurrence in three Asiatic peoples, in two of whom it has the same significance as among ourselves, viz., death of a close relative or friend; while flying and fire dreams have also been recorded for Asiatics.

Suggestions as to Method of Recording Dreams of Non-European Races.

It is suggested that dreams should be recorded somewhat as follows, though it is recognised that it may not be possible to adhere to a set plan:—

(a) The dreamer's account should be taken down word by word in the vernacular, without interruption, prompting or questions.

(b) He should then be asked to explain the whole dream and his statements recorded. If the dream is one with a recognised conventional (group) meaning experience suggests that no great difficulty will be found in eliciting this. There should be no insistence on an explanation as, unless this is obvious to the dreamer, it may be expected to discover more under (c).

(c) After this, unless the dream be of the conventional type (with group meaning) or of the obvious and open wish fulfilment type, outlined in (1), the dreamer should be asked of what each incident or figure makes him think.

(d) It may then be well to ask the dreamer to repeat the whole dream. This account may well be found to be more elaborate than the first and may throw light on the true meaning (latent content) of the dream or of incidents in it (an explanation of even a single incident is worth recording).

It may help the investigator to remember that, although Freud, to whom we owe the first clear statement of dream mechanisms, believed that dreams refer predominantly to the sexual sphere, further research, particularly experience of the War neuroses, shows that any emotion, especially if accompanied by psychic conflict, as in the struggle between fear and duty, may be the efficient cause of dreams. Jung, if I understand him aright, regards the dream as an attempt (usually by way of analogy) at adaptation to present or future demands or difficulties, while it has been suggested that one function of the dream is to make some of life's problems clearer to the dreamer.

I need scarcely add that I shall be most grateful for records of native dreams or parts of dreams which might be sent to me, care of the Royal Anthropological Institute, with an intimation whether it is desired that they be published independently. Failing this I propose to use them with the usual acknowledgments.

C. G. SELIGMAN.

Balkans : Magic.

Durham.

Of Magic, Witches and Vampires in the Balkans. By M. Edith
Durham.

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In all the Balkan lands which I have visited there is still a strong belief in the existence of many supernatural beings, for the most part harmful to man, and also in the existence of many human beings who have the power to communicate with the evil spirits and cause them to work harmfully.

MONTENEGRO.—Here, as in other South Slav lands, the Vila was widely believed in, and I found the belief not yet quite extinct. Vilas were female spirits and therefore usually evil. They were very beautiful and lived in the numerous underground caverns frequent in limestone rocks. But since the coming of artillery they have disappeared. Sometimes they would swear sisterhood with a warrior and be of great service in protecting him from foes. But they were excessively jealous and, should he marry, almost certainly slew his bride. They made love also to male animals. I rode up country upon a white stallion, a pretty little beast. It was turned out to pasture at night. Next morning, before mounting, I began to disentangle the knots in the mane. The owner at once intervened and prayed me not to touch them. The Vilas, he said, had been with the horse all night, he was covered with sweat in the morning. They had knotted the mane as a sign, and if I undid it they would certainly cause an accident *en route*. I was told a tale that "happened a long time ago" of a Vila who, disguised as a beautiful maiden, caused two brothers to fall in love with her. She urged them on to fight and promised herself to the victor. They fought. One killed the other. The Vila laughed and flew away. The luckless survivor then stabbed himself and died. The sympathies of the Vilas were on the whole Slavonic, for they frequently in former days warned the Montenegrins of the approach of the Turks. The phrase "beautiful as a Vila" is still in everyday use. The references to Vilas in the ballads are very numerous.

Ghosts.—As in other lands, there is a very general belief that churchyards after dark are uncanny places and should be avoided. And it is as well to carry a knife. This probably is not to kill ghosts with, but that the iron may serve as a protection. My usual guide, Krsto, firmly believed in the evil power of ghosts.

Vampires.—In Montenegro the vampire is called "tenatz." To become a vampire is "potentzio se." I did not hear of anyone in Montenegro being a vampire during his lifetime, though they used to be formerly. But I heard of recent cases in which they had arisen at night from the grave and caused deaths. A weird tale was told in the Tzermnitza valley. A young man was in love with a girl, but was not allowed to marry her, as her parents had betrothed her elsewhere. She was forced against her will to marry her betrothed. Her lover left Montenegro in despair and died. After death he returned as a vampire and visited the woman at night. She told the neighbours of his visit and was much alarmed. She bore a child by him which, so my guide, who had seen it, assured me, was so exactly like the deceased man that there could be no possible doubt of the paternity. As the man had died abroad nothing could be done to lay the vampire. A corpse suspected of being a vampire can be stopped from rising from the grave either by the usual method of transfixing the body with a stake—a ceremony at which the priest must assist—or by hamstringing the corpse, or by burning it. When a corpse is awaiting burial it is most necessary that it should be constantly watched. If a cat should jump over it, it is sure to become a vampire.

In Bosnia there was, I found, plenty of belief in vampires. Here they are called "lampir" or "vukodlak" (lit. : wolf's hair). I was told by several of the local Austrian governors that when the Austrians first occupied the country (1878) the cases of disinterring bodies and burning them were numerous. The Government

forbade the practice. A recent case (told me in 1906) was when there was an outbreak of typhus (they always called enteric, typhus. I never saw spotted typhus) in a village near Vlasenitza. A young man was the first to die. His wife sickened and swore that her husband had returned in the night and sucked her blood, and said "He is a lampir!" The neighbours, filled with fear, begged the authorities to permit them to dig up and burn his body. Permission was refused and a panic ensued. The lampir was seen and heard by many people and there were fifteen deaths. It would be interesting to know how many of these died because they believed they must die, owing to the lampir. The peasants all through Albania, and Macedonia are extraordinarily affected mentally if they believe they must die, and seem to make no effort whatever to live. In Albania, I heard of more than one case in which a man's death having been foretold by reading the future in fowls' bones, he proceeded to sicken and died. There was no suspicion whatever of poison and the tale appeared to be true.

A patient under such circumstances refuses all food, believing it to be useless.

During the last few weeks a case of burning a vampire's body has been reported from Bosnia.

Witches.—These in Montenegro are called Vjeshtitza. I was told that they do not now exist, but that they did formerly. There was, however, a belief in them, for I saw people kill moths, saying "Perhaps it is a vjeshtitza." Vjeshtitzas were in the habit of changing themselves to moths or flies and entering at night through the keyhole and sucking peoples' blood. The person got more and more pallid and had fever and died. I suggest that the gnat and malaria may be the origin of this belief.

Witches could sail on the sea in a boat made of the shell of an egg eaten on the first of March. My guide's wife, however, used to smash all egg shells. She would not say why, except that it was better to do so. Petar Jovitchevitch, Montenegrin Consul at Scutari, told me that his grandmother always, on the first of March, stirred the ashes on the hearth with two horns (goat's or of cattle), thrusting the horns right through the ash heap, which is usually large. This was to preserve the house from witches, who hold their yearly gathering on that day. On the next day a heap of rubbish was always burnt. He did not know why, except that it was part of the protective ceremony.

In various parts of the country, I was told that in former days the punishment for a witch was stoning to death and that this actually took place. As in other lands, the test for witches was to throw them in water, to see if they sank or floated. Medakovitch, writing in 1860, tells of a case where a woman of the Raichevitches was condemned to be ducked. Her relatives came to the rescue. In the fight four men were killed and a blood feud started.

When I was in Montenegro, it was customary for the bride's brothers to guard her carefully till the groomsmen came to fetch her away, in order to see that no evil-minded person tied knots in the fringe of her *strukka* (long straight garment worn like a plaid), for, if so, she would either miscarry or bear a deformed child.

ALBANIA.—Albania was in a more primitive state, and belief in withcraft and magic universal. People spoke of it as a matter of course and did not pretend not to believe it as in Montenegro.

Weakness and pallor were commonly ascribed to the night attack of a witch (*shtriga*) in the form of a fly, bee, or moth. But *shtrigas* are difficult to detect. They, however, always vomit the blood they have sucked. If you follow one at night whom you suspect, you may see her do so, but you must not let her see you. Some of this vomited blood will make an amulet to protect you against *shtrigas*.

If a woman's hair turns white when she is twenty it is a sure sign she is a *shtriga*. Garlic is a good protection against *shtrigas* and often tied round the necks of children.

Shtrigas can be caught if you make a cross with pigs' bones and fasten it to the door on a feast day when the church is crowded with people. If a Shtriga is in church she cannot get out because of this bone cross and will run wildly round and round trying to escape and so can be captured. They used to be killed "in former days." I did not hear of any recent execution, but gathered that they were sometimes terrorised and maltreated, and sometimes excommunicated by the priest.

As in Montenegro, the Shtrigas are especially powerful in the first week in March. I was told that in Shala it is customary to hang at the doors of the houses at this date—scissors, the comb for carding wool, a black thread tied in knots and an acid fruit (species unidentified), and this not only protects the house but prevents Shtrigas from working evil to mankind in general.

If you catch a Shtriga who has been sucking someone's blood you can save the life of the patient by making the Shtriga spit in his mouth. An Albanian friend of mine described dramatically how he had seen his father thus save the life of a child who was already unconscious and cold. Fortunately he found the right Shtriga. She denied guilt, but he dragged her to the dying child and clapped his pistol to her head, crying, "Spit or I shoot." She spat into the child's mouth and it gradually recovered consciousness and ultimately got quite well, which, as my friend said, clearly proved the guilt of the Shtriga. At one time a large number of the women of the Nikaj tribe were Shtrigas and those also of the Djakova district.

I was once annoyed by a Shtriga myself. I lived at the house of my guide, Marko Shantoya. Riding home from Mirdita, I saw a corn-dolly in an inn, admired it and was presented with it. I hung it on the wall of the room I lived in. At night a number of mice came; I heard them nibbling and found two eating the corn-dolly. Next day I told Marko to buy me a mouse-trap. At night I asked for it and found he had not got one. I again told him and said "Don't forget this time." After several days there was still no trap. Then his wife came to me and said "Please do not ask Marko for a trap. He does not wish to catch the mice." "But why?" "Because he believes they are sent." "Sent? But by whom?" "The woman next door is very bad. We think she is a Shtriga. It is she who has sent the mice. They are not natural. They have come all of a sudden. And if we catch them Marko says she will send something worse." "But what?" "Rats perhaps? We do not know. But it is better to suffer the mice." (Than fly to evils that you know not of.) So I suffered mice till I had the brilliant idea of importing a cat. After much consideration they decided that a cat by its own nature catches mice and that we should not be responsible for its actions. Thus we successfully dodged the wickedness of the woman next door. Marko when asked how it was possible to "send mice" only groaned and said "With the devil all things are possible." And that probably she was in direct communication with Beelzebub or Belial.

Albania is haunted at night by spirits called "Ore" (pl. Ort). Like the Slav Vilas they are female and very mischievous. But they differ in habit. Their chief occupation now, is to appear at night as sparks in the air and to stop travellers from proceeding further by circling around them. This happened to an Albanian friend of mine who could get no further till the first cock crowed, when they disappeared. Cocks are very valuable against evil spirits and under the old mountain laws the theft of a cock was more heavily punished than that of an ordinary fowl.

These "ort" also guard hidden treasure, of which there is a great deal hidden in caves. The "orts" kill all intruders. I was told of such a cave near Djakova where there is an underground bazaar of fabulous wealth, but could not induce anyone to guide me to it. The tale no doubt originates from foul air in the cave. It is possible that the man who saw the bazaar in question and just escaped with his life, dreamed the bazaar while unconscious under the influence of the gas. None of the people who told of supernatural adventures were lying, they

all believed firmly in what they told. I used to give entertainments by casting shadows of animals, etc., on the walls at night with my hands. When I made a horned creature which was supposed to resemble the devil, folk crossed themselves and I was asked not to make this figure again. A Franciscan was very much troubled by it. This was up country. They were also frightened by one or two of the simplest conjuring tricks done by old Marko, who once had to explain his trick to convince the simple people that the devil had nothing to do with it.

Treasure can be guarded also magically by entrusting it to the earth (amanet) and bidding the earth to yield it only when certain ceremonies are performed. If these be not done you may dig in vain at the right spot and find nothing; the earth guards it faithfully.

Belief in the Evil Eye was universal. A good amulet is the head of a snake, cut off with silver (the sharpened edge of a coin). This is dried, and fastened between two medals or images of St. George and blessed by a priest. This represents the destruction of the Evil power by the good one.

The Vampire also exists in Albania and is called "Kukuthi" or "Lugat." Its habits are the same as in other lands and the corpse from which it rises can be rendered harmless by turning or ham-stringing. I came across no examples.

Insanity is always ascribed to the presence of an evil spirit, or several of them. The ceremony of casting out of devils is performed over the insane in church and I have seen Turkish gendarmes bring in a Moslem and lay him before the altar to be exorcised. In order to drive out the devil, great cruelty is sometimes inflicted. In an orthodox monastery, I once saw a wretched lunatic stark naked, tied to a kennel out of doors like a dog and in great misery, but could do nothing to alleviate his lot. The monks were trying to drive out the evil spirits.

There is a grain of truth at the bottom of all strange and primitive beliefs. Modern science and the microscope have revealed the presence of the "evil spirits," the strepto-, staphylo- and other cocci, which are the cause of a very large proportion of physical and mental diseases. Primitive races throughout the world have made a good attempt at diagnosis. It is in treatment that they have failed.

M. EDITH DURHAM.

Finland: Archæology.

Nordman.

The Archæological Literature of Finland in 1922. By C. A.

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Nordman, Local Correspondent for Finland.

In the National Museum of Helsingfors the collections are steadily increasing; the new finds are chiefly results of extensive excavations conducted by the officers of the Museum. A similar centralisation is to be noticed in regard to archæological publications. The Archæological Society of Finland, which is closely connected with the National Museum, publishes a considerable proportion of the archæological works appearing in Finland, partly as separate monographs, partly in the series *Suomen Museo-Finskt Museum* (in Finnish and Swedish) and *Finska Fornminnesforeningens Tidskrift* (below abbreviated FFT.), which includes papers both in the native and in foreign languages.

In the volume for 1922 of the former journal, A. Europæus publishes an important find, including cord-ornamented beakers, from a dwelling-place of the Stone Age. J. Ailio, in his critical investigation of a group of peculiar monuments, discusses a geologico-archæological question, with which, as a geologist and a specialist in the Stone Age, he is highly qualified to deal. C. A. Nordman discusses some problems common to the Stone Ages of Sweden and Finland, and publishes two small Iron Age finds, one of which, a silver earring of "Permian" type of the eleventh to twelfth centuries, such as was found by Sir Arthur Evans in a votive cave on an island in the lake of Enare, Lapland.

More significant, however, are some of the papers included in the Vols. XXIX XXXII, and XXXIII of *F.F.T.* which appeared in 1922. Amongst the most remarkable is Europæus' work in Vol. XXXII, in Swedish, on the finds from Esbo and Kyrkslätt, two parishes in southern Finland, west of Helsingfors. Notwithstanding its modest title, the interesting material and its thorough treatment make it in effect a survey of the Stone Age in South-western Finland; the chapters on the Bronze and Iron Ages are of lesser value. Europæus' book is the most important work on the prehistory of Finland that has appeared during the last 10 or 15 years. Its main merit is, in my opinion, to be found in the author's careful analysis of the different types of antiquities and ceramic styles, and in his arrangement of chronologically and culturally differing groups of finds, with which in part we have become familiar only through Europæus' studies. In regard to the chronological treatment, the author has also used geological data. As is well known, a continuous rising of the land takes place along the shores of Finland, and as the Stone Age dwelling-places once lay, broadly speaking, close to the sea-shore, it has been possible, by ascertaining their height above the present sea-level, to draw fairly exact conclusions as to their relative chronology. As to the absolute chronology, Europæus has had to depend on the results obtained in Scandinavia. To a larger public those chapters of Europæus' book which deal with ethnological questions will, doubtless, be of most interest. Of these the foremost is the question of the ethnic affinities of the so-called boat-axe culture. Europæus presumes that Indo-Germans were the bearers of this culture. Here he accepts views which have also been put forward by others—first, I believe, by Sophus Müller, whose ideas have, clearly, influenced Europæus.

It is, on the whole, apparent that Sophus Müller has had a considerable influence on the younger generation of archaeologists in Finland. Traces of his influence are also to be seen in a paper by A. M. Tallgren: "L'âge du cuivre dans la Russie centrale," in Vol. XXXII of *F.F.T.*, which is chiefly concerned with that Russian battle-axe culture to which Tallgren has given the name of Fatianovo, and which he has compared with the battle-axe cultures of Central and Northern Europe. All are supposed to belong to Indo-Germanic peoples.

Tallgren's paper gives an excellent survey of his studies on the late Stone Age of central Russia, a period which he, somewhat misleadingly, but following the example of well-known authorities, refers to as the Copper Age; I should prefer the name Eneolithic or, perhaps, Sub-neolithic Age. Tallgren endeavours to disentangle the different cultural influences to be found in the culture of Fatianovo. He points out analogies with finds in Germany and Denmark, but emphasises, on the other hand, the importance of the Kouban steppes in the Northern Caucasus: hence came the metals, copper and silver; but, in addition, some types show affinities with Caucasus types. How these cultural influences reached central Russia remains, as yet, an open question. It is doubtful if all of Tallgren's parallels will be able to stand future criticism when more material is available.

J. Ailio, in his work "Fragen der russischen Steinzeit," *F.F.T.*, XXIX, raises some objections, in part justified, to Tallgren's treatment of the Fatianovo culture. The principal merit of Ailio's work is that it is the first attempt to bring order into the chaos of the abundant material of that Russian Stone Age culture of which the main characteristic is the comb-ornamented ceramic. Two chapters treat of the oldest neolithic finds of Russia and Siberia; in Russia the author supposes their centres to be the Valdai region, the country around the upper Volga and Oka, and Olonetz respectively; while all the Siberian finds from the Ob and Yenissei Valleys are said to be later, an assumption which probably needs correction.

In Ailio's treatment of the "comb-ceramic" culture, influences of Danish archaeology are again to be noted. Sophus Müller and others have, during the

War, closely examined the ceramics of the Danish Stone Age, and these results Ailio now applies to the Russian material. While there are so few Russian finds, it may be necessary, in treating the Russian ceramics, to make use of a system formulated elsewhere; but it is by no means certain that a series of styles, proved, for instance, for Denmark, is also valid in the region of comb-ornamented ceramic, where there is no direct cultural connection with Denmark. Ailio's work, however, is of great value, even if some of his chronological conclusions should prove to have been rash. He has set out clearly the different ceramic styles, and he has made accessible important and difficult material, which has hitherto been available only in Russian journals.

Vol. XXIX of the *F.F.T.* contains three more papers by A. M. Tallgren: "Trouvailles tombales sibériennes en 1889," "Trouvailles isolées sibériennes," and "Catalogue de la collection de M. Znamenski." Of these, the first is the most important; it treats mainly of a find from a great mound excavated by Finlandian students at Tes, in the district of Minussinsk.

The only work on the Iron Age of Finland in 1922 is from Ailio's pen: it is a paper in Finnish, but with a good German *résumé* appended, in *F.F.T.*, XXXII, on a group of Carelian oval brooches belonging to the latest Iron Age—according to Ailio, 900–1100 A.D. Ailio attempts to trace the ornamentation and history of the different types of brooches, and puts forward many interesting and convincing suggestions, especially in regard to technical questions; but some of his stylistic parallels and some of his dates will hardly stand close scrutiny.

Vol. XXXIII of *F.F.T.* contains a history, by Th. Schvindt and U. T. Sirelius, of the Ethnographical Museum, which formerly belonged to the students' corporations at the University, but now forms a part of the National Museum.

One work is still worth mentioning in this short review. Though published in Esthonia and devoted to the prehistory of that country it is written by a Finnish student. I mean A. M. Tallgren's work "Zur Archäologie Eestis I," which, though dated 1922, appeared in the beginning of this year. The only students of the prehistory of Esthonia before the Great War were German-Baltic archaeologists; of these, during the last decades, R. Hausmann and A. Friedenthal, in particular, have produced good work. Since Esthonia gained her independence, a chair in archaeology has been founded at the University of Dorpat, which Tallgren has been called to occupy. The work named above is a result. It is the first survey of all that is known of the prehistory of Esthonia, from the Stone Age up to about 500 A.D. It is mainly descriptive, but it contains much that is of great scientific interest. Especially worth mentioning is the chapter on the Stone Age finds around the big lake Virtsjärv and their connection with the geology of that region; also the observation that the Bronze Age of Esthonia is comparable with that of Prussia and not with the Scandinavian; the account of ethnic conditions during the early Iron Age, in accordance with A. Hackman's hypothesis, etc. New finds, however, have, in a few respects, changed the picture drawn by Tallgren: for instance, his own excavations during the summer 1923 reveal that so-called "Reihengräen" of the first centuries A.D. really exist, which he had previously not believed.

I have referred to the recent institution of a chair in prehistoric archaeology in Esthonia. There is also such a chair in Sweden. A chair in this subject has now been instituted at the University of Helsingfors. We may hope that, when in due course the professor has been elected, Finnish archaeology may have more scientific workers at its disposal. They are greatly needed, particularly for the work of excavation.

C. A. NORDMAN.

Sinai: Archæology.

Seton-Karr.

Prehistoric Man in the Sinai Peninsula. By H. W. Seton-Karr.**123**

In the winter of 1921-2 I made a short expedition from El Arish, half-way between Palestine and the Canal, in search of prehistoric stone implements, hoping to find some of similar types to the Fayum examples, which I collected from the beds of ancient lakes, now desert, on the northern side, during six different trips. In this I was unsuccessful, but about 30 miles south I found other types, here figured, on a plain near Jebel Libni. I had found similar examples near Siwa.

H. W. SETON-KARR.

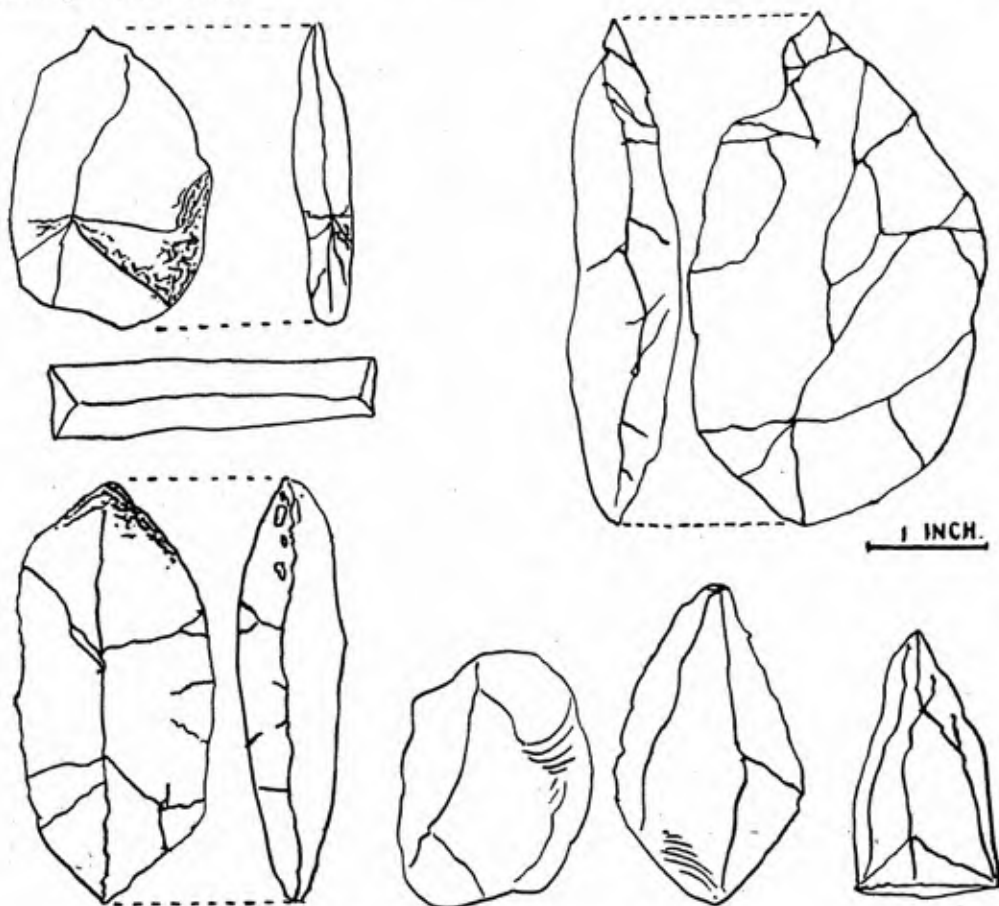


FIG. 1.—STONE IMPLEMENTS FROM JEBEL LIBNI.

Ceylon: Fishing.

Wayland.

Note on a Method of Catching Prawns in Ceylon. By E. J.**124**

Wayland.

With reference to Mr. Charles M. Woodford's note on a method of fishing in the Solomon Islands (MAN 1922, 49) it may be of interest to record that an exactly similar method of taking fresh-water prawns is practised in Ceylon. I have not personally seen these creatures caught by the means that Mr. Woodford details, but the method was described to me by the Sinhalese peasantry in 1913, when I was camped near the Gorge above Hadduwa on the Kelani River.

E. J. WAYLAND.

REVIEWS.

Anthropology, Physical; Disease.

Moodie.

Palæopathology: An Introduction to the Study of Ancient Evidences of Diseases. Roy L. Moodie, M.D. University of Illinois Press, 1923. \$7.50.

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The Antiquity of Disease. By Roy L. Moodie. University of Chicago Press, 1923. 8vo pp. x + 148.

Disease must from very early days have acted as one of the agents of lethal selection, though the intensity of its action has been far greater in the case of man than of the other animals, and has increased coincidently with his aggregation into crowded communities. In the above-mentioned volumes the author traces diseases to their origins, though he is handicapped by the imperfections of the record of the rocks, which, as a rule, preserve skeletal structures only.

Both volumes cover the same ground, but on different scales, the former being a fully illustrated monograph going into minute details with regard to each point raised, with extensive references and bibliography intended primarily for the specialist; the latter is a handy summary for the general reader or the student of allied sciences; but also excellent as regards its *format*, though naturally less completely, albeit adequately, illustrated or annotated.

Bacteria have been found as far back as pre-Cambrian times, and evidently flourished in the Carboniferous era. The first definite evidence of pathogenicity and septic infection occurs in the Permian, from which a fractured reptilian spine shows evidences of osteomyelitis. Certain injuries on crinoids, found occasionally from the Silurian period onwards, may have been due to injuries from tubiculous worms, and represent the beginnings of commensalism, if not of parasitism.

Apparently the sluggish reptiles of the Permian, when injured, were able to remain at rest, so that the parts could heal aseptically with a minimum of inflammatory reaction, as shown in the case of fractures; but later the need to seek food or avoid enemies led to activity, further injury and infection. As the recent period is approached, the evidences of disease increase in number and variety. Suppurative necrosis, possibly tuberculous in nature, is recorded from the Jurassic period, osteo-arthritis and dental disease from the later Mesozoic, and a multitude of bone affections from Tertiary times. As fossilised tsetse flies have been found in the Oligocene of Colorado, it is suggested that possibly trypanosome disease may have been partly responsible for the reduction of the American ungulate fauna.

A good account is given of the pathological findings in early man—from the fractured ulna of him of Neanderthal, to the evidence of Bilharzia infestation, malaria and osteo-arthritis in Egyptian graves. The traces of such surgical operations as trephining and the setting of fractures in primitive culture are fully discussed. Special interest attaches to the history of syphilis, which is discussed at some length; the author inclines to the view that there is no trace of it, so far, in the remains from Egypt, though quoting the grounds on which De Morgan believed it to have existed. The evidence from pre-Columbian America is shown by photographs of bones and by radiographs, and most will, no doubt, concur that it is unconvincing, whether or no they are prepared to agree with Brant and Grünbeck that there is adequate evidence of the presence of the disease in Europe prior to the siege of Naples. In any case, the hypothesis of an American origin of *lues venerea* is now practically without supporters.

These volumes should be consulted by all who are tracing out the life-history of the race, as well as by the historians of the earliest periods, who will find therein solid facts to supplement the scanty early references to the endemic and epidemic prevalence of disease.

F. S.

Africa: Ethnography.

Migeod.

Across Equatorial Africa. By F. W. H. Migeod. London: Heath Cranton Ltd. 1923. Pp. 397 and map. 9 x 6. Price 30s. net. **126**

In this book M. Migeod relates how he crossed Africa from West to East and from East to West. Though the extent of ground covered in little over a year did not permit him to make a thorough study of any single tribe, he travelled as a keen ethnologist and collected, besides his personal observations, a considerable amount of secondhand information, the source of which he always carefully names, leaving it to the reader to judge its value. The book is in the form of a diary in which the experiences are noted down daily; as the index gives tribal and proper names only, anyone interested in a particular aspect of African ethnography will have to go through the whole book to find his subject; this will, however, not be time wasted. The character of the book makes it very difficult to examine its details critically; I must, however, point out that his information, obtained from officials, concerning the Batetela gives this tribe an undue importance. The Basonge (who belong to the Luba family) are not an offshoot of the Batetela and the Basongo Meno are not akin to them. There is one incident recorded which specially interests the reviewer because he met with a similar case just in the region whence the guilty native hailed. In Stanleyville a man was accused of cannibalism because he had devoured the afterbirth of a newly confined woman; he came from the "Kasongo-Kasai" region. Now Captain Hilton-Simpson and I met with an individual at Mokunji (not many miles from Kasongo Batetela) who was pointed out to us as doing this regularly after every birth in the village; it would be interesting to find out if this is pure coincidence or if it is a regular practice; also if it is generally indulged in, or if each village has a scavenger of this kind, as some Luba villages on the Lualaba have their professional cannibals.

The book is well brought out and, with a few exceptions, the illustrations are good. The collection of numerals in the various languages will be useful.

E. T.

Sociology.

Goitein.

Primitive Ordeal and Modern Law. By H. Goitein. London. Allen and Unwin. 1923. Pp. xiv, 302. Price 18s. 6d. net. **127**

As an attempt to formulate a conception of the fundamental nature of law, Mr. Goitein's book is addressed primarily to students of jurisprudence; but the anthropologist will find in it much of interest beyond the fact that the author bases his theory upon material drawn from the institutions of primitive society. After pointing out the unsatisfactory results which follow from either of the usually accepted theories that law is force, or that law is morality, he puts forward the view that law, taken broadly to include the legal process, is allotted its position as a constituent factor in modern societies in virtue of an evolution from the primitive ordeal, itself a development from a stage at which punishment followed wrongdoing without the intervention of a trial. The passage from ordeal to trial, which Mr. Goitein maintains is bridged by the oath, is accompanied *pari passu* by a psychological development from emotion to reason or, as it may be put from another point of view, the human judge is gradually substituted in the regard of the community for the supernatural power which determines the result of the ordeal. Mr. Goitein supports his case by an analysis on psycho-analytical lines of the psychological factors which determine the attitude of man to law and its operations at various stages of human progress, and further strengthens his argument by an appeal to the statistics of the various classes of legal process found among primitive peoples.

Without accepting the author's views in their entirety, it may be said that Mr. Goitein has produced a stimulating study of which the value to the social anthropologist lies mainly in his suggestive criticisms of the methods of field workers in recording legal institutions among primitive peoples and his suggestions for more profitable methods of study.

E. N. F.

Palæontology: Human.

Boule.

Les Hommes Fossiles; Éléments de Paléontologie humaine. Par Marcellin Boule, Professeur au Muséum National d'Histoire naturelle, Directeur de l'Institut de Paléontologie humaine. Deuxième Edition, revue et augmentée. Paris: Masson et Cie., 1923. Pp. 505. 248 figures.

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Fossil Men: Elements of Human Palæontology. By Marcellin Boule. Translated from the French, with an introduction by Jessie Elliot Ritchie and James Ritchie, M.A., D.Sc., F.R.S.E. Edinburgh: Oliver and Boyd. London: Gurney and Jackson, 1923. Pp. xxvii, 504. With 250 illustrations. Price 36s. net.

The first edition of M. Boule's famous work appeared in 1921; already a second edition has been called for; an English translation has also been published. Since the first edition came out a great many papers have been read and published dealing with the various glaciations and the relations to them of the different human cultures. These M. Boule does not notice, as he believes that the discussion is passing through a transitional phase; but one is surprised to find that he makes no allusion to the work of his compatriots, General Lamothe and Professor Depéret. He devotes a page to the recent discoveries of Mr. Reid Moir at Foxhall, but suspends his judgment on the authenticity of eoliths. The most important change is his admission that the Piltdown jaw is human. The English translation is based on the second revised French edition.

H. J. F. P.

ANTHROPOLOGICAL NOTES.

Affiliated Societies.—During the current term the following papers have been presented to the Oxford University Anthropological Society:—October 18th, Mr. L. H. Dudley Buxton, "The Inhabitants of China"; November 1st, Mr. E. T. Leeds, "The Place of the Spanish Peninsula in Pre-historic Times"; November 15, Miss W. S. Blackman, "Survivals in Modern Egypt from Ancient Times"; November 29th was reserved for short communications and exhibits.

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The Spelæological Society of the University of Bristol has a full programme for the session. The communications of the current term include a report on "Aveline's Hole Excavations," by Mr. J. A. Davies; "Notes on Derbyshire Caves," by Mr. Tratman; Mr. St. George Gray, on "Ham Hill, Somerset"; Mr. H. J. E. Peake on "Merchant Venturers of the Bronze Age"; and the Presidential Address by Professor Fawcett. During next term fortnightly meetings will be held, the communications promised including one from Mr. Crawford on "Air Photographs and Earthworks"; Mr. Hewer on "Neolithic Britain"; and Mr. A. C. Hinton, of the British Museum, on "Heresy and Hints for Spelæologists."

International Congress of Americanists.—The twenty-first session of this Congress will be held in two parts; the first taking place at the Hague from August 12th to 16th, 1924, on the invitation of the Netherlands Government; and the second at Gothenburg from August 20th to 25th on the invitation of the Swedish Government.

CORRESPONDENCE.

To the Editor of MAN.

Kohima, Naga Hills, Assam.

SIR,—With reference to MAN, 1923, 60, I have neither the time nor the inclination to start a controversy with Mr. Perry, but since he has accused me apparently of deliberately misrepresenting his work in order that I might have skittles to bowl down, I think I am justified in defending myself against that charge. 130

As regards points (1), (2) and (3), I still maintain that it is a legitimate conclusion from Mr. Perry's book that if one found a tribe in Indonesia with hereditary chiefs one might reasonably expect to find them claiming a descent from the sky and using stone seats and stone graves. I pointed out that the Semas do not fulfil this expectation. No more do the Thados, nor, as far as my knowledge of them yet goes, do the Chang or the Konyak Nagas, two more Naga tribes ruled by hereditary chiefs. Mr. Perry's own quotations will show that to say that my summaries of them are "the veriest travesties" is a splenetic overstatement, to put it mildly.

(4) Mr. Perry apparently accepts my words as conveying the sense of his conclusion, so that there is no misrepresentation here, and may I repeat, since I gather it is not yet clear, that "all Nagas and Kukis habitually sit on seats and not on the ground if they can help it" (392), whether in their houses or out of them.

(5) I think it may be shown that the secular use of stone, by the Angami, for instance, to build walls for terraces and for parts of houses, has been forced on them by natural conditions; but Mr. Perry says that this is beside the point. Anyway, there is no travesty here.

(6) Nor here. Mr. Perry accepts and endorses my quotation from him.

(7) Whatever the conclusion arrived at, a reference to Ch. XX. of Mr. Perry's book will show that it is largely based on the existence of certain food tabus, for which I have offered other explanations. I readily admit having misunderstood, at the time when the passage was written, Mr. Perry's expression "soul-substance." As he meant "vital essence," he might have called it that, but this does not alter the fact that I can find no evidence from the Naga Hills to support the theory as stated by him, unless it be a belief, which I may take this opportunity of reporting from the Chang tribe, that there is an identity of vital essence between the mithan (*bos frontalis*) kept by the spirits in the sky and human beings, so that when the sky spirits slaughter a mithan, a man dies on earth. The Aos, as I understand from Mr. J. P. Mills, make this reciprocal, so that when men kill a mithan, a spirit dies in the sky. It is possible that the Chang view is the same.

As for the Ao origin myth, I merely pointed out that Mr. Perry's conclusions failed in that respect. He himself admits that they "appear to be contradicted." I see no travesty.

As for "terraced irrigation" I note that Mr. Perry's position is that for his purposes "terraced irrigation" and "irrigation" are the same thing. What he said before (137) was "The accounts sometimes only state that irrigation is carried on, and make no mention of terraces, but terraces are so essential to irrigation systems where the ground is not quite flat, and the country in Indonesia is generally so hilly, that there need not be any hesitation in including all the irrigation systems of Indonesia under the heading of terraced irrigation." To a person with practical acquaintance with terraced irrigation as practised in the hills, and irrigation on the flat plains of India, the difference between the two is considerable, and I

think from the emphasis which was laid on the terracing that I was justified in concluding that he wished to distinguish between the two.

I am inclined to think that the differences between Mr. Perry and myself may resolve themselves into differences of method. We can only guess who his Stone-using Immigrants may have been. We do not know (I speak of Assam) who was there before they or their influence appeared, nor what culture. How, then, can we conceivably be justified in postulating of the latter that there were no beliefs in beings connected with the sky? This sort of generalisation from negative data "leaves one gasping" (to borrow Mr. Perry's elegant phrase) if anything can.

I think I have said enough to show that my remarks were not travesties. If there has been any misrepresentation it was unintentional entirely, and, as I suggested (391), I do not for a moment commit myself to the view that Mr. Perry's conclusions are wrong. I have no theories nor any axe to grind, but I am as interested as he is to unravel the prehistory of this part, at any rate, of Indonesia, and am indebted to his work for a number of interesting ideas, which I do my best to suppress when dealing with any facts which they might lead me to colour unduly.

I am, Sir,

Yours, etc.,

J. H. HUTTON.

Archæology.

Burkitt, Thomas.

To the Editor of MAN.

Paleolithic Cave Paintings.

SIR,—Mr. Tristram's suggestion (MAN, 1923, 118) that the Paleolithic cave paintings represent "a happy hunting ground for the dead" is interesting. Some time ago P. Werneut put forward the somewhat similar idea that the so-called "tectiforms" were soul-houses. But when attacking the orthodox view that the paintings of animals were done for magic purposes connected with the procuring of food by saying that no early hunter would have dared to penetrate to the ends of the awesome caves alone, he seems to overlook one fact, namely, that there is evidence that probably a caste of artist-priests existed who would have guided the hunters and conducted the magic. Thus escorted, surely the awful mystery of the deep silent caves would have produced in primitive man a state of mind susceptible to magic influences. It is satisfactory, however, to find Mr. Tristram throwing his weight onto the side of a magical interpretation (if not connected with the procuring of food, at least connected with a cult of the dead) rather than on the side of the "mere decoration" theorists.

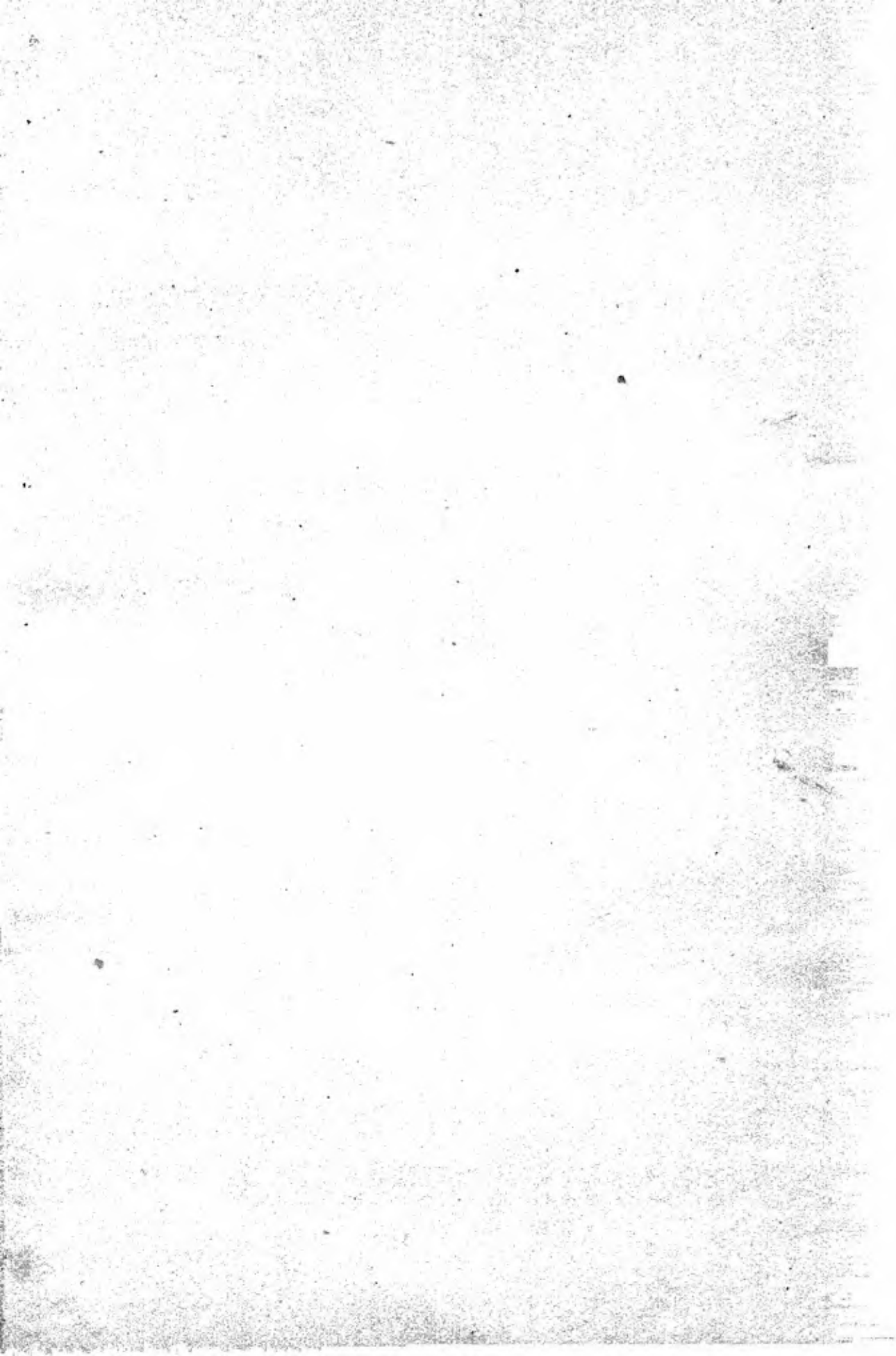
M. C. BURKITT.

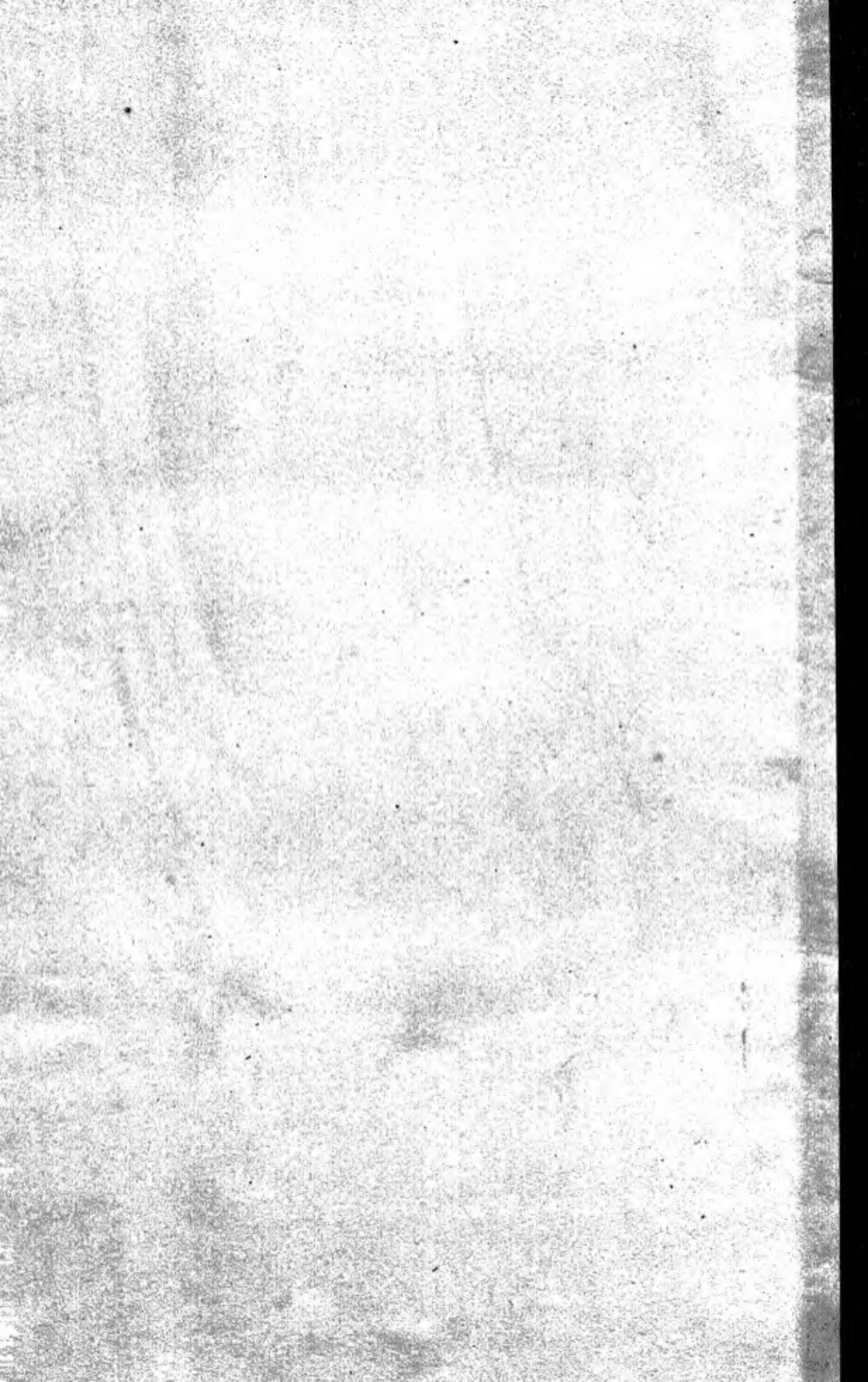
SIR,—The note on this subject by Mr. Tristram has appeared at a moment which is unfortunate for his theory. A work in six parts by Frobenius and Obermaier, "Hadschra Mkaktuba" (Munich, Kurt Wolff) is now appearing, in which are delineated the rock carvings and paintings of north-west Africa; the text will appear with the last part, but it is announced that Obermaier will connect these records with the art of S. France and Spain, i.e., with the cave paintings dealt with in the note, to which I refer. But it is clear that the theory elaborated by Mr. Tristram will not hold good of scenes graven and painted in the open air. The two series appear to be formally identical and are probably contemporaneous, and it is clear that no argument that accounts for one series will be satisfactory unless it also accounts for the other; but Mr. Tristram's whole argument turns on the subterranean character of the European series.

Yours faithfully,

N. W. THOMAS.







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